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ABSENTEEISM BECAUSE OF SICKNESS IN CERTAIN SCHOOLS IN CLEVELAND, 1922–23.[1]

By G. E. HARMON, M. D., Western Reserve University, and G. E. WHITMAN, A. B., Cleveland Board of Education.

In a previous paper[2] the general results of a study of absenteeism among school children were presented. This study was conducted in two schools of Cleveland and included 1,611 pupils with a total possible school attendance of 214,256 days. It was found by including only absences of two days duration or over, a procedure adopted for the investigation, that 6,362 days of school were lost because of sickness, and the present paper deals with an analysis of this lost time.

Among the points brought out in the first paper were the following:

1. Negro children irrespective of sex and age lost less time from school than white children because of sickness.
2. There was indicated a slight tendency for girls to lose more time from school than boys because of sickness.
3. The older age group (10–14) lost less time from school than the younger age group (5–9) because of sickness.

The question naturally arises as to whether these conditions hold when a method of analysis making use of case rates is employed. It seemed preferable to express these rates as the number of cases per 10,000 possible days of school attendance rather than in the usual way of relating the cases to the number of persons exposed. This method was adopted because of the fact that the school enrollment is constantly changing, so that the figure representing the total number of children for the year includes many who were connected with the schools for only a short time. The liability of absence, therefore, is more accurately expressed when related to the total possible days of school attendance to which each pupil contributed in proportion to the length of his enrollment than when related to the number of students. Table 1 presents general information, and in columns 8 and 9 are found case rates computed as just described for white and negro children for each sex and certain age groups.

[1] From the Department of Hygiene and Bacteriology, School of Medicine, Western Reserve University and the Department of Attendance, Cleveland Board of Education.

[2] Absenteeism among white and negro school children in Cleveland, 1922-23. By G. E. Harmon and G. E. Whitman. Pub. Health Rep., 39, 12, pp 559-567. Reprint No. 908.

TABLE 1.—*General morbidity data.*

Sex and age.	Number of children—Total for school year.		Total possible days of school attendance.		Total cases of sickness during school year.		Cases per 10,000 possible days of school attendance.	
	White.	Negro.	White.	Negro.	White.	Negro.	White.	Negro.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Both sexes:								
All ages	918	693	126,433	87,813	728	309	57.6	35.2
5–9 years [1]	541	297	72,029	37,407	495	167	68.7	44.6
10–14 years [2]	377	396	54,404	50,406	233	142	42.8	28.2
Male:								
All ages	458	369	63,786	44,906	343	138	53.8	30.7
5–9 years [1]	274	143	37,140	17,693	250	74	67.4	41.8
10–14 years [2]	184	226	26,646	27,213	93	64	35.0	23.5
Female:								
All ages	460	324	62,647	42,907	385	171	61.5	39.8
5–9 years [1]	267	154	34,889	19,714	245	93	70.2	47.2
10–14 years [2]	193	170	27,758	23,193	140	78	50.4	33.6

[1] Includes a few of undetermined age. [2] Includes a few over 14.

The rates in columns 8 and 9 of Table 1 substantiate the results obtained by the method of analysis first used: the case rates for negro children are seen to be less than those for white children; the case rates are higher for females than for males; and the older age group exhibits smaller case rates than the younger age group. It follows from the above that the loss of a smaller amount of time from school by the negro children because of sickness as compared with that lost by the white children is due to some extent to the occurrence of fewer cases.

In considering the causes of absences due to sickness it was found to be most desirable to group the numerous reasons assigned under relatively few heads. The classification of causes appearing in Table 2 was the one finally adopted. While most of the headings of this classification are definite and clearly indicate the nature of the cases included, there are a few which need some explanation. Under the heading "respiratory infections" were included the cases ascribed to bronchitis, cold, grippe, flu, influenza, pneumonia, and sore throat, or, in other words, general infections of the respiratory tract. Under "tonsils (diseases of)" were included cases due to tonsilitis and removal of the tonsils. When the cause was so poorly stated as to have no definite meaning, the case was placed under the heading "Cause not given and ill-defined." Under "miscellaneous" were grouped those cases due to causes which were infrequent, such as asthma, appendicitis, boils, Bright's disease, chorea, croup, constipation, felon, goiter, headache, ivy poisoning, laryngitis, rheumatism, sumac poisoning, tuberculosis, vaccination, and worms.

TABLE 2.—*Morbidity data classified as to cause.*

Cause.	White.			Negro.			Both races.		
	Total cases.	Total days of school lost.	Per cent of all days lost because of ascertained sickness.	Total cases.	Total days of school lost.	Per cent of all days lost because of ascertained sickness.	Total cases.	Total days of school lost.	Per cent of all days lost because of ascertained sickness.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Respiratory infections	394	1,883	47.2	139	651	41.0	533	2,534	45.4
Measles	53	521	13.0	24	288	18.2	77	809	14.5
Scarlet fever	21	463	11.6	2	56	3.5	23	519	9.3
Chicken pox	53	470	11.8	3	30	1.9	56	500	9.0
Tonsils (disease of)	34	225	5.6	27	153	9.7	61	378	6.8
Miscellaneous	19	181	4.6	15	68	4.3	34	249	4.5
Accident and injury (general)	7	51	1.3	9	65	4.1	16	116	2.1
Digestive system (diseases of)	28	90	2.3	8	21	1.3	36	111	2.0
Ringworm				5	111	7.0	5	111	2.0
Whooping cough				5	88	5.6	5	88	1.6
Diphtheria	3	42	1.0	3	19	1.2	6	61	1.1
Accident (auto)	2	9	.2	3	24	1.5	5	33	0.6
Teeth (disease of)	6	20	.5	4	10	.6	10	30	.5
Ear (disease of)	5	17	.4	1	2	.1	6	19	.3
Eye (disease of)	5	12	.3				5	12	.2
Mumps	3	9	.2				3	9	.1
All ascertained causes	633	3,993	100.0	248	1,586	100.0	881	5,579	100.0
Cause not given and ill-defined	95	511		61	263		156	774	

It is readily seen from Table 2 that for both white and negro children respiratory infections and measles were the most important causes of sickness. When both races are considered, scarlet fever and chicken pox come next in importance. It should be noted, however, that among the negro children there were very few cases of these last-named infections, whereas among the white children chicken pox was almost as important a cause of absence as measles. The four conditions—respiratory infections, measles, scarlet fever, and chicken pox—were responsible for 83.6 per cent of the days lost because of sickness due to ascertained causes among white children, and for 64.6 per cent among negro children. Attention is called to the fact that cases of diphtheria were surprisingly few, that there were no cases of ringworm or whooping cough among the white children, and that there were no cases of mumps or disease of the eye among the negro children. As shown by the rates in columns 4 and 7 of Table 3, the negro children have more favorable rates, except for the following causes: Accident and injury (general), ringworm, whooping cough, and accident (auto).

TABLE 3.—*Days of school lost for certain causes per 10,000 total possible days of school attendance.*

Cause.	White.			Negro.			Both races.		
	Age 5–9.[1]	Age 10–14.[2]	All ages.	Age 5–9.[1]	Age 10–14.[2]	All ages.	Age 5–9.[1]	Age 10–14.[2]	All ages.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Respiratory infections	182.0	105.5	149.0	104.7	51.6	74.2	155.0	79.4	118.5
Measles	70.7	2.2	41.2	55.5	16.1	32.8	65.5	8.8	37.8
Scarlet fever	46.5	23.8	36.6	15.0	0.0	6.4	35.6	12.3	24.2
Chicken pox	60.2	6.8	37.2	6.1	1.4	3.4	41.7	3.8	23.4
Tonsils (disease of)	24.1	9.4	17.8	18.2	16.9	17.4	22.1	12.9	17.7
Miscellaneous	9.6	21.1	14.4	12.8	4.0	7.7	10.7	12.6	11.7
Accident and injury (general)	0.6	8.6	4.1	11.5	4.5	7.5	4.3	6.6	5.5
Digestive system (diseases of)	4.9	10.2	7.5	2.0	2.8	2.4	3.9	6.6	5.2
Ringworm	0.0	0.0	0.0	19.9	7.3	12.7	6.8	3.5	5.2
Whooping cough	0.0	0.0	0.0	23.5	0.0	10.0	8.0	0.0	4.1
Diphtheria	5.8	0.0	3.3	4.0	0.8	2.2	5.2	0.4	2.8
Accident (auto)	0.0	1.7	0.7	1.6	3.7	2.8	0.5	2.6	1.6
Teeth (diseases of)	1.5	1.7	1.6	1.3	1.1	1.2	1.5	1.4	1.4
Ear (diseases of)	2.4	0.0	1.4	0.7	0.0	0.3	1.8	0.0	0.9
Eye (diseases of)	1.3	0.6	0.1	0.0	0.0	0.0	0.9	0.3	0.6
Mumps	1.2	0.0	0.7	0.0	0.0	0.0	0.8	0.0	0.4
Cause not given and ill-defined	51.8	25.4	40.4	38.2	23.9	30.0	47.2	25.1	36.2
All causes	462.5	216.5	357.0	315.5	134.0	211.0	413.0	176.4	297.0

[1] Includes a few of undetermined age. [2] Includes a few over 14.

A study of columns 2, 3, 5, and 6 of Table 3 brings out the fact that the older age group had lower rates than the younger for most of the causes listed. This general result agrees with what has been previously shown to be true when total time lost on account of sickness is considered. The following exceptions to the statement just made, however, should be noted. Among the white children the older age group had higher rates than the younger for the following causes: Miscellaneous, accident and injury (general), digestive system (diseases of), accident (auto), and teeth (diseases of). Among the negro children the older age group had the higher rates for the following causes: Digestive system (diseases of), and accident (auto).

In collecting the data relating to cases of sickness, an attempt was made to ascertain the type of attention which each case received. The results of this part of the investigation are presented in Table 4. It is noted that a much larger percentage of cases among white children were attended by regular physicians as compared with the cases known to have received such attention among the negro children.

TABLE 4.—*Per cent of total cases for which information was obtained, receiving a given type of attention.*

Type of attention.	White.	Negro.
None	37.5	54.6
Regular physician	61.0	22.7
Other attendant	1.5	22.7

In Table 5 there is presented the frequency distribution of the duration of cases of sickness measured in school days lost, which data were used in computing certain of the probable errors dealt with below. In calculating these constants, because of the relatively few absences which were not of whole-day duration, it was considered that sufficiently accurate results would be obtained by using the initial values of the various groups as midpoints rather than the real midpoints of the groups. The data presented clearly show that while there were some absences of quite long duration the majority lasted for only a few days.

TABLE 5.—*Frequency distribution of the duration of cases of sickness measured in school days lost.*

Duration of sickness in school days lost.	White.	Negro.	White.				Negro.			
			Male.		Female.		Male.		Female.	
			5-9[1]	10-14[2]	5-9[1]	10-14[2]	5-9[1]	10-14[2]	5-9[1]	10-14[2]
2 and less than 3	184	82	53	34	60	37	19	17	16	30
3 and less than 4	121	58	36	17	33	35	9	11	22	16
4 and less than 5	72	35	22	7	24	19	10	12	5	8
5 and less than 6	108	43	38	15	31	24	11	6	17	9
6 and less than 7	34	15	16	3	10	5	2	3	5	5
7 and less than 8	34	13	11	4	14	5	4	5	2	2
8 and less than 9	24	6	11	1	9	3		1	4	1
9 and less than 10	26	5	11	1	10	4	1		2	2
10 and less than 11	33	15	17	1	15		5	4	4	2
11 and less than 12	13	4	1	1	9	2	1	1	1	1
12 and less than 13	13	3	7	2	4		1		2	
13 and less than 14	6	3	2		4				3	
14 and less than 15	9	4	7		2		1	2	1	
15 and less than 16	8	4	2	1	3	2	1	1	2	
16 and less than 17	2	4			1	1	2		2	
17 and less than 18	4			2	1	1				
18 and less than 19	5	1	4		1		1			
19 and less than 20	8	2	2	1	4	1	1	1		
20 and less than 21	5	2	2	1	2				1	1
21 and less than 22	1				1					
22 and less than 23	2		1		1					
23 and less than 24	2				2					
24 and less than 25		1					1			
25 and less than 26	2	3	1		1		1		1	1
26 and less than 27	2			1	1					
28 and less than 29	1	2	1						2	
30 and less than 31	1				1					
33 and less than 34		1							1	
34 and less than 35	1			1						
35 and less than 36	1	1	1				1			
36 and less than 37		1					1			
38 and less than 39	2		2							
39 and less than 40		1					1			
45 and less than 46	1					1				
47 and less than 48	2		2							
58 and less than 59	1			1						
	728	309	250	93	245	140	74	64	93	78

[1] Includes a few of undetermined age. [2] Includes a few over 14.

Among white children of all sex and age groups the average duration of cases was 6.18 ± 0.15 days of school, whereas among the negro children this average was 5.98 ± 0.22. The difference between these two averages is 0.20 ± 0.26, the probable error being larger than the

difference. This result indicates that there is no significant difference between the average time lost from school per case of sickness when white and negro children are compared. Since this is so, the smaller relative amount of total time lost from school because of sickness by negro children must be due to the smaller number of cases which occurred among them. This result agrees with the deduction made from Table 1.

It has now been shown for the group studied that not only did the negro children proportionally lose less time from school because of sickness than did the white children, but also that a relatively smaller number of cases of sickness occurred among them than among white children. A superficial consideration of these facts as shown for the group of school children studied, might lead to the conclusion that negro children are less subject to disease than are white children. Because of the small sample studied, however, if for no other reason, such a conclusion is unjustified. Then, too, only those cases of sickness which resulted in two days or more of absence from school have been considered. Since the total number of cases of sickness among the school population was not determined, mild cases were probably not recorded, with the result that the number of cases included depended to some extent upon severity. It may well be mentioned that severity measured by the number of days lost from school may depend upon the attitude of parents toward illness among their children rather than upon any inherent resistance or susceptibility to disease. Do white parents keep their children out of school for a longer time than do colored parents on account of differences in social, economic, or other conditions? If this is the case, some explanation is available for such of the results obtained in this study as are at variance with what might be expected to be true concerning the actual extent of morbidity among the white and negro children.

TABLE 6.—*Average duration of cases of sickness measured in days of school lost.*

Race and age groups.	Average duration of cases of sickness.		Difference.
	Male.	Female.	
White:			
5–9 years	6.86±0.28	6.59±0.23	0.27±0.36
10–14 years	5.54±0.49	4.73±0.26	0.81±0.55
Negro:			
5–9 years	7.41±0.62	6.77±0.42	0.64±0.75
10–14 years	5.17±0.30	4.41±0.28	0.76±0.41

In Table 6 the average duration of cases of sickness is so presented as to make possible an evaluation of the influence of sex. While a consideration of the column headed "Difference" suggests that there is possibly no significant difference in the duration of cases among

boys and girls, the probable error being almost as large as or greater than the difference, nevertheless it should be noted that the average duration of cases of sickness for females is consistently slightly less than that for males.

TABLE 7.—*Average duration of cases of sickness measured in days of school lost.*

Race and sex.	Average duration of cases of sickness.		Difference.
	Age, 5–9.	Age, 10–14.	
White:			
Male	6.86±0.28	5.54±0.49	1.32±0.56
Female	6.59±0.23	4.73±0.26	1.86±0.35
Negro:			
Male	7.41±0.62	5.17±0.30	2.24±0.69
Female	6.77±0.42	4.41±0.28	2.36±0.50

Table 7 is arranged to show the effect of age upon the duration of sickness. It is shown that the average duration of cases of sickness is shorter in the older age group than in the younger group. That the differences between these two groups is significant is evident from the last column of the table, where it will be seen that their differences are from 2.3 to 5.3 times the corresponding probable errors. As has been previously shown, the older group has a lower case rate than the younger group; and now it is evident that it also experiences a shorter average case duration.

Since respiratory infections are the most important cause of absence from school due to sickness, it will be of interest to consider the average duration of these cases and the medical attention which they received. The average duration of cases of respiratory infections occurring among children in the age group 5–9 was 5.16 ± 0.15 days of school, whereas for cases occurring among children in the age group 10–14, the corresponding constant was 4.09 ± 0.14. A difference of 1.07 ± 0.20 between these averages indicates definitely that the cases of respiratory infections are of shorter duration among the older children than among the younger children. While among the white children 50.6 per cent of the cases of respiratory infections for which the necessary information was obtained were attended by regular physicians, only 26 per cent of the cases among negro children were so attended.

Table 8 presents information concerning the average duration of cases due to certain important causes, and the per cent attended by a regular physician. Because of the small number of cases of each disease, an analysis by race, age, and sex has not been made.

TABLE 8.—*Average duration of and type of attendance for cases of sickness due to certain causes.*

Cause.	Average duration days of school lost.	Per cent of cases for which information was obtained attended by a regular physician.
Measles	10.50±0.44	73.9
Scarlet fever	22.50±1.67	95.2
Chicken pox	8.93± .34	66.0
Tonsils (diseases of)	6.20± .31	63.6
Digestive system (diseases of)	3.08± .19	2.6

SUMMARY.

The results obtained for the group studied by use of the methods described may be summarized as follows:

1. Negro children had a lower general morbidity rate and lower specific morbidity rates for most causes of sickness than the white children.

2. The average duration of cases of sickness measured by days of school lost was approximately the same for both white and negro children (6.18 ± 0.15 school days for white children and 5.98 ± 0.22 for negro children).

3. The percentage of cases known to be attended by a regular physician was greater among the white than among the negro children.

4. As between boys and girls, there was no significant difference in the average duration of cases of sickness, but girls experienced a slightly higher general morbidity rate than boys.

5. The older group (10–14) experienced not only a much lower general morbidity rate than was true for the younger age group (5–9), but also a significantly shorter average duration per case.

6. Respiratory infections and measles were the two most important causes of absence from school due to sickness.

7. Scarlet fever caused longer absences than any other disease, and was more often attended by a regular physician. In these respects it was followed, in the order named, by measles, chicken pox, diseases of the tonsils, and diseases of the digestive system.

Acknowledgment.—The authors desire to express their appreciation to the Department of Anatomy, Western Reserve University, for the preparation of the graphs appearing in their first paper.

THE SANITARY PROBLEM.

ADDRESS DELIVERED AT THE UNIVERSITY OF CHILE, JULY 28, 1923, BY DR. ALEJANDRO DEL RIO.[1]

I. Introduction.
II. General Considerations.
III. Public Hygiene and the Fifth Pan American Conference.
IV. Necessity for Adopting a Sanitary Policy.
V. Bases for the Revision of Our Sanitary Organization.
VI Conclusions.
VII. Plea to the President of the Republic.

I. Introduction.

The recent Pan American conference, of which I have had the honor of forming a part as a member of the delegation of Chile, has called me once more to the consideration of the sanitary questions which interested me in times past when I filled the chairs of hygiene and bacteriology of the Medical School and the directorship of the Institute of Hygiene, and later, in 1911, when associated with the Fifth Pan American Sanitary Conference, over which I had the great and unmerited honor of presiding.

This fresh contact with the sanitary problem and with the eminent hygienists of both Americas, and the distressing comparison I have been compelled to make between what we have accomplished and the enormous, stupendous progress made in these last decades throughout the continent, have given me some reflections on the future which we have to contemplate if we do not now halt on the verge of the abyss and face the conditions to which faulty administration and sanitary anarchy are hurrying us. Such reflections now induce me to suggest what seem to my judgment the ways and means of rescuing the country from its unhappy situation.

As a medical hygienist I passed many cruel moments at the fifth conference, both in the committee on hygiene and in my daily intercourse with the distinguished sociologists who were our guests, whenever there was any occasion to refer to our organization and our sanitary status; and I promised myself that I would answer the call of duty and love of country which summoned me to take up my struggle of former years.

Hence, I now appear before you here to break a lance for public hygiene, also called preventive medicine, which has not, up to the present time, received from our public men the consideration that it deserves, save in a few isolated and unrelated efforts which have given no results.

II. General Considerations.

Public hygiene from the point of view of legislation gives a very satisfactory impression if we consider the letter of the law. Our

[1] Translated from Anales de la Universidad de Chile, segunda serie, año I, 3er. trimestre de 1923.

sanitary code, save in those parts which relate to the organization of the personnel and the legal sanctions, is, in general terms, good; its regulations as formulated to date produce the impression of being well considered. The laws relating to internal affairs assign to the municipalities a very ample field of action and might have been effective if long, disappointing, and apparently conclusive evidence had not fully demonstrated the complete and absolute breakdown in communal action and the weaknesses of the fundamental laws of urban hygiene.

We have to confess that we have committed the grave error of trusting more than was justified to the efficacy of law, and the still graver error of resting satisfied with fine phrases which meant nothing in view of the defective organization which we possess, the lack of trained personnel devoted solely to its several functions, the total absence of auxiliary personnel, by which I mean sanitary nurses, and finally to the insufficient means provided for the maintenance of the different branches under the municipal appropriations.

Our mortality rate remains in most cases stationary, or shows only slight variations, and is expressed in terms now unknown in the majority of civilized countries; the infantile mortality rate is appalling; preventable endemic diseases are unchecked; epidemics have a free field of action, as in the epochs which we recall with horror; and the social scourges, the fateful triad, alcoholism, tuberculosis, and the venereal diseases, affecting the germ of life, are rapidly carrying off at least one race which in better times was proverbially healthy and strong. Influences of a purely social and economic nature operate also in diminishing the natural defenses against the forces adverse to health.

It is time to meet this evil in all its intensity and to act like brave men—to act as a race should act that intends to exist in full and vigorous health and well-being, free from the daily accidents occasioned by conditions which are in their nature preventable, as becomes a race which aspires to a better future and to an existence passed under good community conditions and in decent dwellings.

Regrets are useless, as are also endeavors to fix responsibilities for past and present conditions. Let us simply confess that we have erred, that we have lacked foresight, that we have missed our way to the desired end, which is "to live in normal sanitary conditions," and let us endeavor to find the right road.

Like the path of virtue, it is difficult and often thorny. It offers no immediate flattering prospects of ease, but it leads to a desired end. It is difficult because sanitary service is not improvised but requires previous training of personnel, both directive and auxiliary, and each scientifically equipped and specialized. It is a thorny path because it requires much pecuniary sacrifice on the part of

State and municipality to remunerate this personnel in a manner adequate for securing an efficient organization. Economy and penuriousness are in this situation counteractive, since they neither remedy existing evils nor prevent epidemic explosions which, in the end, compel great expenditures whether we will or no, made without due consideration at the last moment and under the pressure of circumstances.

The sphere of public hygiene to-day is wider than of old; its modes of action have undergone an evolution; its social aspect has expanded in a manner not hitherto imagined. It aims not only at the reduction or extinction of diseases of a contagious or infectious nature, but seeks to improve conditions and to correct injurious influences; and, as regards the individual, it strives to amend faulty tendencies and to invigorate the system; to provide for work to be carried on under conditions which do not exceed the limits of normal strength; and to give to the worker the satisfaction of full health and enjoyment of life. From being bureaucratic, hygiene has become popular in the widest meaning of the term, bringing to each household the modern messengers of the goddess Hygiene, the sanitary nurses, agents of the new order, who are of inestimable social and technical value.

Until recently the efforts of hygiene work have been directed torward urban conditions. To-day we understand better the importance of the conditions in which the rural population lives, and we endeavor to bring to the rural community the benefits of sanitary activity. Great importance is also attached in these days to eugenics and child welfare, not only during the first two years of life, but throughout the school-age period. Toward this end modern organizations work with special zeal in creating medical and sanitary services having wide scope and trained efficiency and laboring with excellent results in this rich harvest field of sanitary endeavor.

III. Public Hygiene and the Fifth Pan American Conference.

The fundamental principles established by the Fifth Pan American Conference as regards sanitary matters are of great significance for the future of preventive medicine in countries on the American continent. The Chilean delegation had the honor of proposing, among other things, the declaration expressed in such precise terms by Doctor Vincent, first in his principal statement and later in a special declaration in terms agreed upon first by Chile and later by Cuba. The resolutions as they relate to the matter in hand are as follows:

"2. That the efficiency of a public health administration depends directly on the existence of an expert and experienced personnel

which can be secured only by the recognition of the fact that preventive medicine constitutes a special profession for which there should be provided appropriate training, permanence in office, promotion based solely on meritorious service, and a pension system.

"That each country should consider a program which includes the following points:

"(*i*) Full recognition, by means of special training, permanence in service, adequate remuneration, and social prestige, of the profession of public hygiene as a special field of activity essential to the welfare of the state.

"(*ii*) Institution of courses of preparation for public health personnel or the education of individuals, selected by the Government, in the universities of other countries.

"(*iii*) Exchange visits of the representatives of the sanitary organizations with other countries."

These principles, accepted without alteration by the conference, form the corner stone of the future sanitary organizations of American countries. They are particularly interesting to us on account of their having been formulated by the president of the Rockefeller Institute, the noted American sociologist, Doctor Vincent; and their unanimous adoption by the committee on hygiene and the plenary conference will go far in influencing the opinions and action of our public men.

I shall consider it my duty, in accordance with the purpose of the conference, to address a communication to the rector of the university, soliciting his aid and that of the administrative council in favor of carrying out two plans suggested by the resolutions of the conference which have already been cited. The first is to send abroad as many as six Chilean physicians, selected by the faculty of medicine, who shall for two years devote themselves exclusively to the scientific and practical study of sanitary science and methods. These physicians, having previously formally renounced professional practice of medicine, shall, from the start, be under contract to serve, on their return, as sanitary physicians, particularly in the field of preventive medicine, under the immediate direction and authority of the director of health. It shall be stipulated that, in addition to the pension which they receive during their special studies abroad, they shall receive on their return an initial salary of 20,000 pesos, which shall be increased by 5,000 pesos every five years until a maximum of 40,000 pesos is reached. Every form of private professional practice shall be prohibited. In order not to burden the national budget too heavily, it is proposed that the authority conferred on the President of the Republic shall cover a period of six years in order that not more than two appointees be sent abroad at the same time.

The favorable reception which this proposition has received from the authorities of the university and from the press of the capital, and later from the Government, is a happy augury of success; and so the noble purpose of creating a sanitary organization ought be to decisively demonstrated as being worth while.

The second project submitted to the university relates to the creation of a school of hygiene designed to instruct the remainder of the personnel required by the public health service in the discharge of the duties entrusted to them. This school might, in turn, serve to perfect and specialize the sanitary nurses who fill such an important rôle in modern health organizations. The realization of this plan will not involve great national expenditure. The school of hygiene will also be of use in giving special sanitary training to hospital physicians and surgeons who desire to attain the grade of section chief in those establishments in order to cooperate effectively with the technical boards. It will also be of use to the medical personnel serving in child-welfare institutions as officers or in a private capacity.

Activated by this line of thought, the board of charities at Santiago has petitioned the Government for funds to create in the hospitals under its direction new training schools for nurses. At present they have such schools only at the Manuel Arriaran and San Vincente de Paul hospitals. If, as is to be hoped, the desired funds are appropriated, Santiago will, in another year, have five schools for the proper training of nurses, which will mean not only an immediate and substantial gain for the hospitals themselves and for the general public, but also for the sanitary service, which will thus have at its disposal a trained personnel available for its own needs.

It has also been proposed to reorganize the present State school of nurses and to devote it exclusively to the training of sanitary nurses. In any event, whether by this means or the plan previously referred to, the idea of contracting for a sanitary nurse to found this new career among us, which has met with favor from the rector of the university and which figures in the estimates for the coming year, deserves an enthusiastic reception. Let us hope that this request may be received as it deserves by the Government and the Congress.

In view of the extraordinary results obtained since the great war, in European countries and in America, by means of the institution of sanitary nurses, I venture to express the belief that the expenditure to this end will be considered to be in the category of the unavoidable. In truth, the course of progress may not be arrested with impunity.

In spite of some natural skepticism I remain deeply persuaded, ladies and genetlemen, that we are now going to succeed; and I cherish strong hope that out wishes will soon be realized, since on

their success rests the future of our country. I feel sure that patriotism will prove to be no empty word in the ears of our representatives, however impervious their hearing may have been made to appear from their wearisome daily differences and political conflicts, to which they have devoted themselves with rare tenacity, and by their complete misunderstanding of national feeling.

IV. Necessity for Adopting a Sanitary Policy.

In the matter of sanitation, as in many other things, we have shown ourselves lacking in certain particulars which are the rule and not the exception in Anglo-Saxon countries, such as practical sense and the spirit of perseverance in efforts tending toward a useful end. Hence, notwithstanding our accomplished work in this direction, particularly as regards pure water and sewage, the results viewed as a whole lack unity, and, above all, efficacy. We enact good laws but neglect to enforce them; we create functions which require a numerous and technical personnel and do nothing to supply that personnel; and when, as sometimes happens, we create a special branch, it is found impossible to keep it in operation, owing to the insufficient financial support provided for it by law.

Among the unfavorable causes which have operated to bring about our incompetency in public hygiene, we should mention that parliamentary omniscience which deforms the best considered laws and devitalizes cooperation, reducing to zero the influence of technical experts. Laws, such as sanitary laws, prepared by competent persons, should be approved or rejected, but not amended out of existence. Happily for us, there exist in this country some persons eminently fitted to cooperate in this work and exceptionally free from the taint of political corruption.

Another factor in our failure to progress is the permanent insufficiency of the resources assigned to our work, aggravated by the usual delay in the passage of the annual appropriation act, with the inevitable consequence of a disorganized service and demoralized personnel.

Everything points to and counsels resolute handling of this problem and the precise definition of the sanitary policy of the future, with revision of the present legislation and the existing service with a view to securing for both the necessary scope and requisite efficiency.

We need, therefore, a plan or a sanitary policy which will lead us in due time to a better state of things—to a condition which the country needs and demands for its proper development, and which shall free us from those evils which retard our progress and from the reproach of not having appreciated, and endeavored to attain to, the position in these respects which is enjoyed by happier countries in this hemisphere and on this continent.

This policy is certainly capable of realization and is not beyond our financial capacity. The following points should be considered:

(1) Reforms to be introduced into the present sanitary legislation to render it adequate to meet the existing national needs judged by the accepted modern viewpoint.

(2) Proper means of creating a specialized technical personnel capable of successfully carrying out sanitary measures.

(3) The training of visiting sanitary nurses or the creation of an auxiliary personnel, which is indispensable to any modern organization of this nature.

(4) The fundamental necessity for providing the sanitary service with funds sufficient adequately to remunerate the personnel and enable them to devote themselves exclusively to their official duties, thus securing from the various sections and from the laboratories adequate services.

In view of their extreme importance we will consider each of these questions separately.

The first, which relates to the revision and modernization of the sanitary laws, is of great significance and will serve as the theme of the following section.

With respect to the second and the third, creation of sanitary personnel, directive and auxiliary, we will refer to the resolutions of the Fifth Pan American Conference and to what I have already said in regard to sanitary nurses in preceding sections of this paper.

We come now to the capital question, the financial one. The State and municipality should seriously consider the vital necessity of improving the sanitary conditions of the country on the one hand, and on the other, the ways and means of securing this result and complying honorably with what Disraeli defines as "the first duty of a statesman" in referring to the care of the public health. The problem does not admit of an equivocal solution. The deals and fictions to which assemblies—Congressional or municipal—so often have recourse to satisfy in form but not in fact the rightful aspirations of the country in such vital matters, serve only to cause discouragement in the public mind, and distrust of the methods, badly applied, and of the men who are compelled to serve as the working medium for such ineffective action. Our country has a vital need; we have the right not only to live, but to live in health. The country requires a proper sanitary service and should make the necessary sacrifices to secure the proper results, which have been vainly striven for, yet never attained, in spite of good suggestions and of laws passed to this end.

How much shall we expend for public hygiene? How much should we expend for really efficient sanitary service?

According to information furnished me by my valued friend, Mr. Alvaro Covarrubias Arlegui, chief of the central bureau of statistics,

the estimated amount assigned to public hygiene for the year 1922 was 1,224,000 pesos. To this should be added the amounts allotted by the sanitary laws on emergencies to combat epidemic diseases, with a possible total of not to exceed 1,500,000 pesos, a considerable part of which is given under these laws to the aid of the board of charities to cover the expense of unusual hospitalization.

It is difficult to estimate the amount of the municipal expenditures for this work; but a study of the several estimates gives a total expenditure of 2,012,435 pesos for hygiene and charity, the sum of 412,260 pesos for charity, and approximately 1,600,000 pesos for hygiene. These figures do not accurately represent the facts, since it is well known that, in certain cases, the total amount of the municipal estimates complies only in form with the legal requirement of apportioning 10 per cent of the appropriations to hygiene and that the amounts legally assigned to this end are very variously diverted. How much is actually expended? It would be venturesome to make a precise estimate in this respect, but I do not think I exaggerate in reducing this figure to only 500,000 pesos.

We see, therefore, that the country will expend annually in public hygiene, summing up the items which are represented in the estimates of the municipality and the treasury, approximately 2,000,000 pesos. To appreciate the significance of these figures we will make a brief statement of the amounts required for sanitary and public-health work in other countries. In England, the cradle of hygiene, State and municipalities expend annually more than 1,000,000,000 francs. The sanitary personnel numbers 25,062, as is shown in the following statement:

1,600 medical inspectors, of whom 285 devote themselves exclusively to their official duties;
238 physicians for the prevention of tuberculosis;
1,300 medical school inspectors;
1,300 medical inspectors of working conditions;
324 medical inspectors of the insane and retarded;
4,800 medical inspectors of the poor;
12,000 medical inspectors for social insurance;
2,000 sanitary inspectors and social workers, male and female; and 1,500 advisers in hygiene and sanitation.

In the United States of North America, it is estimated that a properly conducted health service requires approximately an annual expenditure of $1 for each inhabitant. The city of New York expends about $3.50 per inhabitant yearly, or approximately $20,000,000.

In Brazil the annual estimate for health purposes equals 30,000,000 milreis. (The Brazilian milreis has about the same value as the Chilean peso.)

These statements afford a basis for comparative estimates.

Let us take as a basis the American standard—$1 per person per year for public-health work. It would not be excessive, it appears to me, for us to fix the fiscal quota at half this amount, Estimating the average value of the dollar as 5 pesos in the money of Chile, and the population as 4,000,000, we have, $2.50 \times 4{,}000{,}000 = 10{,}000{,}000$ pesos. It is to be noted that in assigning to the health service the sum of 10,000,000 pesos, the proportion thus assigned would scarcely exceed 2.5 per cent of the total estimate.

As regards the communal estimate, I consider that its quota should not be less than half that of the state, or 5,000,000 pesos.

To sum up: We spend 2,000,000 pesos; we should spend 15,000,000.

The margin of 13,000,000 pesos allows us to consider the possibility of giving to hygiene the position which belongs to it in any group of people who have become convinced of the value of health and life and who do not wish to endure mortifying and belittling comparisons.

This array of millions and the bold statement that in order to live like decent human beings we would be required to expend not less than 2.5 per cent of the fiscal appropriations, together with a municipal expenditure equal to half the former amount, or, I repeat, 15,000,000 pesos in all, might cause me to appear as one insane—a dweller in the moon, or, to my medical friends, bordering on general paresis. I find myself, therefore, obliged to give an explanation which devolves on me as a Chilean citizen and permit myself to interpret my aspirations for national greatness without the suspicion of having fallen into a pathologic delirium.

I believe that our sanitary service is now in its infancy, and that as it develops we will have to make greater provision for its maintenance. I consider that its growth can not be very rapid, given the difficulties presented by its reorganization and the time that will be required for the preparation of its personnel, particularly for the departments which are to be created.

In any event, we should prepare our minds to accept cheerfully the pecuniary sacrifices which reform will bring with it, having in view the figures and the examples which I have cited and the calculation of the cost of good sanitation. There is no need, however, of alarming our financiers in the slightest degree at present. Perhaps by 10 years more, having progressed sufficiently, we shall have seen the necessity of reaching the goal now presented. But the money which will have been expended for this purpose will undoubtedly be proved to be such a good investment that cavilers will be silent, even those most hardened objectors, whose negative minds invariably react against those great problems that to be understood need to be studied.

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No doubt we shall hear strange statements with regard to sanitation from politicians. I still remember with amazement some astounding opinions on technical sanitary matters which, during my experience at the Institute of Hygiene, I had to listen to from the ministers of state in the department of the interior. And if it were not for the high respect which these distinguished servants of the country deserve in other branches of the public service, I might here draw a humorous picture for the amusement of my kind hearers. I still believe, however, that progress and the diffusion of knowledge will remove the impressions of the past, and that the hygienization of the country will in future find a more favorable field for its development and completion.

V. Bases for the Revision of Our Sanitary Organization.

The sanitary organization which we are about to sketch broadly and generally is really only an amplification of that now existing, but with better and more logical form than we now possess, and with the addition of new departments to meet the demands which have only in very recent years met with general acceptance.

When the time comes to revise the present sanitary code as it relates to the organization of the several services functioning under it, the way will have been opened to provide for the creation of new departments or sections as required without the enactment of new laws at every turn. In this way, the interpretation of the laws permitting, we will be enabled to keep step with the advance of sanitary science and adapt its dictates to our national needs.

The "bases" presuppose an amplification of the functions of the state at the expense of those which the laws of internal government assign to the municipality. As far as we are concerned, long and uninterrupted experience has taught us what we have to expect of "municipal hygiene," given the usual characteristics of the communal administration as it is found in this country, except for some infrequent and honorable exceptions. The municipalities having lost the habit of exercising their political rights as those rights are to-day understood, while persisting in the disconcerting activities which characterize their normal administration, and lacking the excellence which the "qualification of age" should bring, it is necessary for the state to take under its care, at least in Santiago, such sanitary services as those of water supply, sewer construction, paving, public relief, etc.

In the case of the properly functioning municipalities and in regions under State control the convenience of giving the State a preponderating share in sanitary matters which are not strictly local has been recognized. Thus in the United States, when a situation of this sort, as, for example, the unusual development of an endemic disease

or an epidemic outbreak, is not properly met by the State concerned and a public menace is thus created, the Federal Government intervenes. In the same manner a manufacturing food plant whose products are consumed throughout the country and abroad comes within the sphere of Federal action. It would be easy to multiply examples.

The national health service should be in the department of hygiene, which has been found to offer many advantages in England, France, Poland, Czechoslovakia, Serbia, Austria, Canada, and many other countries. Under the department of state there might be established a service of social welfare and labor and public aid or charity.

This suggestion is based on the hope that "ministerial accession" will be supplanted by a definite system which will allow the affairs of the country to be duly administered. The three sections of the proposed department will be under the respective "director generals," no intermediaries coming between them and the minister, except nontechnical employees concerned simply with the transaction of business.

The general health bureau will consist of a secretary, to whom shall be assigned a trained counselor, and eight departments, viz:

1. Infant hygiene.
2. Social hygiene.
3. Prophylaxis.
4. Urban hygiene.
5. Rural hygiene.
6. Regulation of food products and beverages.
7. Regulation of the practice of certain professions (medicine, dentistry, pharmacy) and of commercial handling of drugs.
8. Sanitary engineering.

The following statements present the leading features of the organization:

DEPARTMENT OF HEALTH.

Welfare and Labor, Public Health, and Charities.

SECTION OF PUBLIC HEALTH.

Director General of Health and Trained Counselor.

Department No. 1. Infant Hygiene:

Section 1. Infant welfare—

Antenatal care;

Encouragement of maternity hospitals and attendance for home confinements;

Training of special nurses for child welfare (specialization in this branch);

Inspection of works and institutions for protection of infancy.

Department No. 1. Infant Hygiene—Continued.

Section 2. Medical school inspection—

Proper organization of medical school service throughout the country;
Inspection of this service;
Special training of sanitary nurses to this end;
Encouragement of school lunches as a regular institution;
Encouragement of open-air schools and vacation camps; and, in general, all that tends to protect the child during school age.

Department No. 2. Social Hygiene:

Section 1. Demography—

The periodical publication of demographic statistics and direct special inquiries which may be deemed necessary.

Section 2. Eugenics—

A study of all problems concerning the degeneration of the race;
Proposal for the adoption of measures judged adequate to ameliorate and invigorate the race;
Proposal of limitations tending to prevent incorporation of immigrants who may be undesirable from the sanitary and eugenic point of view;
Encouragement of open-air amusements;
The combating of alcoholism and other causes of degeneration of a toxic character.

Section 3. Propaganda and instruction—

Diffusion of knowledge of hygiene;
Education by notices, leaflets, moving pictures;
Publication of short letters;
Formation of specialized sanitary personnel (physicians and sanitary nurses);
A high school for hygiene.

Section 4. Hygiene of labor—

Studies relative to the relations between health and labor;
Work of women and children;
Sicknesses and professional accidents;
Workmen's insurance.

Department No. 3. Prophylaxis:

Section 1. Prophylaxis on land—

General prophylaxis;
Special prophylaxis;
Venereal diseases;
Smallpox;
Exanthematic typhus.
Animal prophylaxis—Diseases transmissible to man.

Section 2. Maritime prophylaxis—

Sanitary service at ports;
Sanitary stations;
Inspection of immigrants, etc.

Section 3. Isolation and disinfection—

Measures to secure proper isolation in charitable institutions for infectious, acute, or chronic patients;
To have at command the disinfection service of the city;
To inspect disinfecting plants, departmental and public, and the disinfecting installations at sanitary stations, port sanitary service, etc.

Section 4. Laboratories—

Laboratories required for the preparation of serums, vaccines, and biologic and opotherapeutic products;
Investigation laboratories (experimental);
Laboratory to facilitate the diagnosis of infectious diseases.

Department No. 4. Urban Hygiene:
Section 1. Urbanization—
Plans and studies in the improvement of city construction;
Plazas and gardens; city and suburban parks, etc.
Section 2. Hygiene of the home—
Sanitary approval of plans for new constructions;
Sanitary control of dwellings, particularly those intended for renting, etc.
Section 3. Sanitary inspection of public establishments, comprising—
Visits to schools, hospitals, quarters, factories, workshops, etc.
Department No. 5. Rural Hygiene:
Section 1—
Popular educational courses throughout the country.
Training of sanitary nurses for rural hygiene work.
Section 2.—Rural sanitary work by means of outfits prepared by physicians and nurses.
Department No. 6. Legalization of Food Products and Beverages:
Section 1.—Sanitary inspection of food products and beverages at the capital.
Section 2.—
Inspection of municipal hygienic laboratories;
Sanitary inspection of factories producing food products, etc.
Section 3.—Central laboratory for bromatology.
Department No. 7. Regulation of Professions and Commerce in Drugs:
Section 1. Regulation of professions—
Regulation of the medical profession;
Regulation of dentists, midwives, and nurses;
Regulation of pharmacists.
Section 2. Inspection of pharmacies and the manufactories of pharmaceutic products; control of specifics.
Section 3. Laboratory of analytical chemistry.
Department No. 8. Sanitary Engineering:
Section 1.—Potable water, drains, mineral waters.
Section 2.—Public baths, disposal of refuse.
Section 3.—Constructions in general; their regulation and inspection.

I desire here to confine myself to simple announcements of headings, since development of the subjects would involve wearisome details of secondary importance at this time. When these formative ideas meet with favorable reception it will then be time to express them in competent legal form, a more or less laborious undertaking, which will require some time and the collaboration of experts.

VI. Conclusions.

In the course of this address I have endeavored to be brief and concise, even at the risk of not being sufficiently clear in the development of the ideas enunciated. I desire, therefore, to state the conclusions which sum up my convictions. They are as follows:

1. The state of public hygiene in this country is lamentable.

2. We have good sanitary laws, but only a rudimentary organization.

3. Generally speaking, municipal cooperation with national sanitation is rare and of doubtful results.

4. The quota which the estimates of the state and municipalities assign to public hygiene are insufficient to maintain effective sanitary services. The country expends for this purpose 2,000,000 pesos annually; it should expend not less than 15,000,000 pesos.

5. It is of vital importance to react energetically against this state of things and to approach boldly the great national question of elevating, cost what it may, our sanitary status—the basis of our future prosperity, social and economic.

6. The formation in systematic form, and on the basis fixed by the Fifth Pan American Conference, of a sanitary personnel. First in this line should come the approval of the proposed law recently sent to Congress for the establishment in foreign countries of a group of medical hygienists, followed shortly by the creation of an advanced school of hygiene.

7. It is equally necessary to modernize our present sanitary organization by improving the existing services and creating new services judged essential for attaining the end desired.

8. To designate a technical commission to prepare and submit to the consideration of Congress a proposed law giving the sanitary service the efficiency which the country demands.

To conclude, I desire to make one statement. The criticism which I have expressed with absolute frankness and without the literary elegancies which would dissemble the sanitary needs of the state and the present efficiency of the organization, both central and municipal, may give rise to interpretations which I would forestall. I have deliberately omitted any expression which might be considered personal, because I am happy to acknowledge that the officials in charge of the present activities are deserving of all consideration for their knowledge and devotion. If their activity does not meet the sanitary necessities of the country, the fault lies with the defective organization which they direct, the lack of technical assistance, with the meager and, in some cases, ridiculous remuneration which they receive, and, finally, with the limited means placed at their disposal and the uncertainties which result from the frequent defaults in the state appropriation.

I owe it to the managers and editors of the great dailies of the capital to say a few words of thanks and appreciation for their support and their prompt approval of the stand taken against the sanitary pauperism in which we live, and for their active and effective cooperation in the patriotic work of giving the country a proper sanitary service.

VII. Plea to the President of the Republic.

I beg Your Excellency to excuse me, if, deviating from my theme for a moment, I address myself directly to you who have been pleased to honor this occasion with your presence.

Your Excellency, Chile figures like a great black stain on the sanitary map of South America. Our sister nations of the Atlantic have been happier than we, and have had, in due time, statesmen who forged weapons with which to overcome the causes of disease of natural or merely human origin. Montevideo expresses her civilization by showing a general mortality rate not in excess of 12 per 1,000. Buenos Aires offers a rate which does not exceed 16 per 1,000. Rio, a city which in the past was unvisited by tourists on account of a well-founded fear of yellow fever, not only finds itself definitely freed from that plague, but has seen its general mortality rate decline to less than 19 per 1,000.

On the other hand, in our own capital, statistics show a mortality rate which in the five-year period 1918–1922 reached an average of 33.4 per 1,000, with a record of 39.2 per 1,000 in the years 1919 and 1921.

This situation can not be prolonged without grave detriment to our prestige. The problem is exceptionally grave. If death continues to reap in this country, which deserves a better fate, the abundant harvest which our neglect or indifference permits, the native biological increase, which is the only factor for the increase of our population, will be slow and we will fall behind our kindred countries, which are more farsighted and which grow, prosper, and flourish. Dr. Rodriguez Barros, in his inaugural address to the faculty of medicine, recently called attention to a new unfavorable feature; that is, our high natality, which formerly filled up the ranks depleted by death, is on a constant decrease.

I entreat Your Excellency to take an energetic part in the great work of making the country sanitary and ameliorating the conditions of life, thus carrying on, regardless of antiquated objections and pettinesses, the reforms demanded by the existing sanitary organizations and creating new organizations as public needs require.

I have confidence, Your Excellency, that, in your administration and under your auspices and by your activity, those great reforms will be carried out which will give us, I assure you on my conscience and with all my faith, a new Chile, with a sane mind in a healthy body, respected for her population, for her energy in all spheres of activity, for her economic and social prosperity, and for the greatness of her institutions, among which shall figure, in the place of honor, those which patriotism dictates to our legislators in regard to the public health.

HAY-FEVER PLANTS OF THE KANSAS CITY DISTRICT.

A knowledge of the plants which are the specific causes of hay fever is fundamentally essential to health officers and the medical profession in the prevention and treatment of that disease. It is necessary in order that pollen extracts of the species can be made for skin-reaction tests and for the desensitization of the patient by use of the extract or extracts found to give a positive reaction; and also in order that the noxious weeds and grasses may be identified and eradicated, where possible, or avoided by persons susceptible to their toxic action. As the flora varies with different sections of the country, with the altitude, climate, seasons, rainfall, and other conditions, special studies must be made from the standpoint of floral geography in order to ascertain which plants of each particular section play the important rôles in the causation of hay fever, asthma, and plant dermatoses.

A report of an eight-year botanical and clinical study made in Kansas City and the surrounding territory by Dr. W. W. Duke and Mr. O. C. Durham was recently published in the Journal of the American Medical Association.[1]

In the botanical studies, notes were made each year relative to the abundance in growth of the different plants, the relative quantity of pollen produced by each, the nature of the pollen, dates of pollination each season, and dates of greatest abundance of production. In the clinical studies an effort was made, by means of histories, together with scratch, intracutaneous, ophthalmic, nasal, and therapeutic tests, to determine the rôle played by each plant.

The quantity of pollen in the air was found to vary not only with the wind but with other weather conditions. On cloudy days the pollen practically ceased to be carried into the observation greenhouses, and cloudy weeks were associated with periods of marked relief for hay-fever patients.

Pollination was found to antedate clinical hay fever by two weeks or more.

A comparison of the botanical observations with the results of specific testing showed that plants producing the greatest quantity of pollen over the longest season were the most important factors in the causation of illness. The "tree season" is relatively short and the number of trees small compared with the grasses and weeds, so that the quantity of pollen set free from the trees each year is not so great as that from the weeds and grasses; and it was found, as a result of skin testing, that persons sensitive to tree pollen were relatively rare.

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[1] A botanic survey of Kansas City, Mo., and neighboring rural districts—with reference to the flora responsible for hay fever, asthma, and dermatoses. By W. W. Duke, M. D., and O. C. Durham. Journal American Medical Association, March 22, 1924. pp. 939-944.

The "grass season" is longer than the "tree season" and the growth of the grasses, though more profuse than that of the trees, is less profuse than that of the weeds; therefore, the quantity of grass pollen set free each year is greater than that released by the trees but less than that released by the weeds. It was also found that "grass cases" were much more numerous than "tree cases," but less numerous than "weed cases."

The fall weeds were the greatest pollinators. They are general in distribution and profuse in growth, and produce light pollen in quantity over a long season. In harmony with this fact, the investigators found, by specific tests, that fall weeds were by far the most common sources of illness in the district studied. Of the weeds, the two ragweeds found to be the greatest producers of pollen were also the most common sources of illness.

The majority of the skin tests were made by injecting intracutaneously 0.01 c. c. of a solution containing 0.01 mg. of pollen to a cubic centimeter.

Most of the patients showed skin sensitiveness to a large number of pollens, often to each member of a certain group of pollens. As a general rule, the pollen that gave the strongest skin test was the one that gave a positive conjunctival test when sprayed into the eye in a dilution of 1:1000. The pollens which gave less intensive skin tests usually gave negative conjunctival tests. The pollens that gave positive conjunctival tests, therefore, were the ones considered responsible for the symptoms, and were chosen for therapeutic use. Usually, therapy with these pollens (from one to four in number) gave complete clinical relief.

The authors make note, however, that the above statements were subject to marked exceptions. Several instances were observed in which the patient was actually made ill by exposure to pollen of air which did not include the one pollen to which he reacted most markedly when tested by skin and conjunctival tests.

As regards specificity, patients sensitive to ragweed in one locality were often found to be unaffected by ragweed pollen in other districts.[1] It was also noted that pollen which caused the patient to have hay fever was not necessarily the pollen to which he was the most sensitive, but the one which he received in greatest dosage. In other words, the authors state, symptoms seem to be the result of a mean between degree of sensitiveness and dose of pollen encountered. It is noted that of the patients who were clinically sensitive to pollen, 45 per cent reacted positively to some other substance—vegetable, grain, sea food, or animal dandruff. Some patients who were sensitive to pollen also reacted to some other part of a plant, either of the same or of a different family.

[1] This has been questioned by good authorities.—Ed.

In summary the authors state:

"It is interesting to note how closely the botanic data harmonize with the results obtained by specific testing. Of the pollen-sensitive patients, by far the greatest number were sensitive to the light pollens set free in the air in the greatest abundance over the longest period of time; first and foremost, to short ragweed; secondly, to giant ragweed, and less often to cocklebur, marsh elder, lamb's quarters, wormwood, and *Acnida*. The latter weeds showed relatively large percentages so far as skin tests were concerned; but not nearly so great a proportion as this gave positive conjunctival tests, and we believed that patients were not so often made ill by these pollens in the amounts encountered naturally as the skin tests would indicate. The spring grasses, with their shorter season and smaller ratio of pollen production, did not compare in number of sensitive cases with fall weeds. Finally, the trees with their relatively short season and comparative scarcity were responsible for very few cases. In fact, we did not observe a sufficient number of tree cases to permit the drawing up of substantial statistics. So few patients were found sensitive to flowering plants and cultivated grains that these cases were put down as curiosities. It seemed quite clear that the principal offenders, both in number of cases and in the duration and severity of illness produced, were the weeds which produce the greatest quantity of pollen over the longest period of time."

The more common plants in Kansas City district producing dry, light pollen in relative abundance.

Popular name.	Dates of pollination—Number of weeks in—								Percentage of positive tests.
	March.	April.	May.	June.	July.	August.	September.	October.	
Hazelnut	++								0
Cottonwood		++							0
Birch		++							0
Box elder		++							0
Ironwood		++	+						1
Oak			+++						1
Sycamore			++						0
Ash			+						0
Hickory			+++						1
Black walnut			++++	+					0
Red sorrel			++++	++++					0
Rye			+++	+++					10
Dock			++	+++					
Blue grass			++	+++					6
Orchard grass				+++					6
Lamb's quarters				++	++++	++++	++++	+++	15
Timothy				++	++				15
Buckhorn			+	+++	+++				2
Slough grass				+++					14
Spiny amaranth					++	++++	++++	++++	
Water hemp					++	++++	+++		3
Hemp					+	++++	++++	++++	10
Giant ragweed						++++	+++	++++	42
Pigweed						++++	++		30
Slender pigweed						+++	+++	++	3
Hop						++	++	+++	
Cocklebur							+++		40
Short ragweed							++++		70
Roadweed							+++		40
Western ragweed							++		
Tall redtop grass									
Marsh elder							++		21
Burweed marsh elder									
Marsh marigold							+++	+	15
Wormwood							++		15

The more important plants and the weeks during which pollination is most profuse are indicated by heavy-faced type. (The representation of the weeks by the above method, while not rigorously accurate from the standpoint of the calendar, is obviously quite sufficiently so for the purpose in hand.—Ed.)

DEATHS DURING WEEK ENDED MAY 24, 1924.

Summary of information received by telegraph from industrial insurance companies for week ended May 24, 1924, and corresponding week of 1923. (From the Weekly Health Index, May 27, 1924, issued by the Bureau of the Census, Department of Commerce.)

	Week ended May 24, 1924.	Corresponding week, 1923.
Policies in force	56, 109, 722	52, 189, 682
Number of death claims	11, 057	10, 026
Death claims per 1,000 policies in force, annual rate	10. 3	10. 0

Deaths from all causes in certain large cities of the United States during the week ended May 24, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, May 27, 1924, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended May 24, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 24, 1924.[2]
	Total deaths.	Death rate.[1]		Week ended May 24, 1924.	Corresponding week, 1923.	
Total (64 cities)	6, 441	12. 5	[3] 12. 1	847	[3] 693	
Akron	28			1	8	11
Albany [4]	40	17. 6	14. 2	2	6	44
Atlanta	68	15. 6	11. 7	6	3	
Baltimore [4]	213	14. 1	14. 0	27	34	78
Birmingham	67	17. 4	15. 2	8	5	
Boston	203	13. 6	13. 1	21	27	58
Bridgeport	32			4	3	63
Buffalo	127	12. 1		15		64
Cambridge	27	12. 6	15. 9	3	6	52
Camden	30	12. 4	11. 8	2	2	32
Chicago [4]	706	12. 5	11. 8	136	85	126
Cincinnati	121	15. 5	15. 4	13	11	82
Cleveland	186	10. 6	10. 2	31	24	81
Columbus	57	11. 1	12. 2	7	5	67
Dallas	44	12. 2	12. 0	6	8	
Dayton	31	9. 6	9. 5	1	5	17
Denver	72			10	13	
Des Moines	29	10. 4	12. 2	1	1	
Detroit	282			48	55	89
Duluth	29	14. 0	10. 3	5	1	107
Erie	18			4	4	82
Fall River [4]	31	13. 4	12. 9	5	3	70
Flint	10			2	3	35
Fort Worth	15	5. 3	6. 2	2	1	
Grand Rapids	16	5. 6	11. 8	1	5	16
Houston	39			5	4	
Indianapolis	77	11. 5	13. 4	11	4	83
Jacksonville, Fla	33	16. 8	12. 5	7	4	
Jersey City	79	13. 2	13. 0	10	9	72
Kansas City, Kans	26	11. 5	11. 3	1	3	20
Kansas City, Mo	97	14. 1	15. 6	12	10	
Los Angeles	227			32	26	100
Louisville	99	20. 0	16. 4	7	8	67
Lowell	30	13. 5	12. 7	8	2	143
Lynn	11	5. 5	13. 7	1	2	25
Memphis	46	13. 9	17. 8	3	6	
Milwaukee	98	10. 4	11. 9	22	13	101
Minneapolis	98	12. 2	12. 6	12	9	64
Nashville [4]	46	19. 4	13. 6	5	4	
New Bedford	26	10. 2	17. 6	4	8	62
New Haven	27	8. 0	10. 2	4	4	52
New Orleans	148	18. 8	17. 3	19	15	
New York	1, 398	12. 1	10. 8	173	148	70
Bronx Borough	164	9. 8	8. 0	16	15	56
Brooklyn Borough	470	11. 2	10. 0	57	44	61
Manhattan Borough	617	14. 2	12. 9	79	72	77
Queens Borough	118	11. 1	9. 2	20	14	109
Richmond Borough	29	11. 6	13. 1	1	3	18

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1923. Cities left blank are not in the registration area for births.
[3] Data for 61 cities.
[4] Deaths for week ended Friday, May 23, 1924

Deaths from all causes in certain large cities of the United States during the week ended May 24, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, May 27, 1924, issued by the Bureau of the Census, Department of Commerce)—Continued.

City.	Week ended May 24, 1924		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 24, 1924.
	Total deaths.	Death rate.		Week ended May 24, 1924.	Corresponding week, 1923.	
Newark, N. J	92	10.8	10.9	13	13	61
Norfolk	38	12.1	9.2	8	1	145
Oakland	48	10.1	11.1	4	3	50
Oklahoma City	22	11.0		9		
Omaha	50	12.5	11.2	6	5	64
Paterson	21	7.8	12.3	2	3	33
Philadelphia	450	12.0	12.7	47	50	60
Pittsburgh	154	12.8	9.3	28	17	95
Portland, Oreg	71	13.3	8.0	8	4	83
Providence	51	10.9	14.2	8	7	65
Richmond	57	16.2	14.1	9	4	106
Rochester	73	11.7		4		31
St. Louis	200	12.8	15.0	22	18	
St. Paul	50	10.7	13.4	4	4	34
Salt Lake City [1]	30	12.2	13.2	3	6	50
San Antonio	65	17.7	16.7	17	16	
San Francisco	115	10.9	13.7	8	13	48
Schenectady	22	11.4	11.1	3	2	85
Seattle	75			8	5	77
Somerville	25	13.0	8.4	2	4	54
Spokane	20			2	2	42
Springfield, Mass	26	9.1	10.5	1	2	17
Syracuse	47	13.0	13.6	6	5	74
Tacoma	21	10.6	12.8	3	0	69
Toledo	69	13.0	10.8	10	7	95
Trenton	35	14.1	11.1	8	2	131
Utica	25	12.4	8.6	3	1	65
Washington, D. C	121	13.0	12.5	11	9	63
Waterbury	15			2	1	45
Wilmington, Del	23	10.0	13.7	2	9	43
Yonkers	23	10.9	9.2	3	2	66
Youngstown	38	12.8	9.7	4	5	58

[1] Deaths for week ended Friday, May 23, 1924.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT WEEKLY STATE REPORTS.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

Reports for Week Ended May 31, 1924.

ALABAMA.

	Cases.
Chicken pox	36
Diphtheria	7
Influenza	21
Malaria	54
Measles	173
Mumps	61
Ophthalmia neonatorum	1
Paratyphoid fever	1
Pellagra	7
Pneumonia	45
Scarlet fever	5
Smallpox	59
Tuberculosis	39
Typhoid fever	21
Whooping cough	43

ARIZONA.

Chicken pox	1
Diphtheria	1
Measles	10
Mumps	1
Scarlet fever	3
Smallpox	8
Trachoma	30
Tuberculosis	9
Typhoid fever	1

ARKANSAS.

Chicken pox	13
Diphtheria	4
Hookworm disease	2
Influenza	30
Malaria	67
Measles	48
Mumps	14
Pellagra	9
Scarlet fever	6
Smallpox	13
Trachoma	2
Tuberculosis	19
Typhoid fever	6
Whooping cough	41

CALIFORNIA.

	Cases.
Cerebrospinal meningitis—Stockton	1
Diphtheria	234
Influenza	12
Lethargic encephalitis:	
Butte County	1
Los Angeles	1
Oakland	1
Measles	565
Scarlet fever	145
Smallpox:	
Huntington Beach	10
Long Beach	14
Los Angeles	72
Los Angeles County	38
Scattering	38
Typhoid fever	15

COLORADO.

(Exclusive of Denver.)

Chicken pox	10
Diphtheria	11
Influenza	4
Measles	123
Mumps	15
Pneumonia	4
Scarlet fever	12
Tuberculosis	29
Typhoid fever	2
Whooping cough	6

CONNECTICUT.

Cerebrospinal meningitis	1
Chicken pox	42
Conjunctivitis (infectious)	1
Diphtheria	32
German measles	18
Influenza	5
Malaria	4
Measles	144
Mumps	112
Ophthalmia neonatorum	1
Pneumonia (lobar)	20

Reports for Week Ended May 31, 1924—Continued.

CONNECTICUT—continued.

	Cases.
Scarlet fever	107
Tuberculosis (all forms)	39
Typhoid fever	1
Whooping cough	21

DELAWARE.

Chicken pox	1
Influenza	1
Malaria—Laurel	9
Measles	12
Mumps	5
Pneumonia	8
Scarlet fever	9
Tuberculosis	1
Whooping cough	3

FLORIDA.

Diphtheria	7
Leprosy	1
Malaria	12
Typhoid fever	12

GEORGIA.

Chicken pox	16
Diphtheria	7
Dysentery (amebic)	1
Dysentery (bacillary)	17
Hookworm disease	19
Influenza	1
Malaria	16
Measles	2
Mumps	21
Pneumonia	14
Scarlet fever	8
Septic sore throat	1
Smallpox	28
Tuberculosis (pulmonary)	22
Typhoid fever	4
Whooping cough	17

ILLINOIS.

Cerebrospinal meningitis:	
Chicago	1
La Salle County	1
Diphtheria:	
Cook County	61
Scattering	32
Influenza	7
Lethargic encephalitis—Chicago	1
Measles	886
Pneumonia	221
Poliomyelitis—Carroll County	1
Scarlet fever:	
Cook County	120
La Salle County	9
Scattering	69
Smallpox:	
Lake County	12
Scattering	31
Tuberculosis	266
Typhoid fever	11
Whooping cough	120

INDIANA.

	Cases.
Chicken pox	23
Diphtheria	32
Influenza:	
Grant County	19
Scattering	13
Measles	215
Mumps—Marion County	65
Pellagra—Crawford County	1
Pneumonia	7
Scarlet fever:	
Lake County	14
Scattering	38
Smallpox:	
Jay County	14
Marion County	38
Scattering	54
Tuberculosis	24
Typhoid fever	9
Whooping cough	73

IOWA.

Diphtheria	19
Scarlet fever	40
Smallpox	28

KANSAS.

Chicken pox	45
Diphtheria	17
German measles	4
Influenza	6
Lethargic encephalitis	1
Measles	340
Mumps	105
Pneumonia	33
Scarlet fever	40
Smallpox	35
Tetanus	1
Tuberculosis	51
Typhoid fever	5
Whooping cough	42

LOUISIANA.

(Exclusive of New Orleans.)

Diphtheria	5
Dysentery	5
Hookworm disease	21
Influenza	17
Malaria	11
Measles	52
Pellagra	8
Pneumonia	91
Smallpox	13
Tuberculosis	52
Typhoid fever	19
Whooping cough	7

MAINE.

Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	9
German measles	4
Measles	50

Reports for Week Ended May 31, 1924—Continued.

MAINE—continued.	Cases.
Mumps	10
Pneumonia	7
Scarlet fever	23
Tuberculosis	9
Typhoid fever	1
Vincent's angina	1
Whooping cough	59
MARYLAND.[1]	
Cerebrospinal meningitis	1
Chicken pox	58
Diphtheria	32
Dysentery	1
German measles	30
Influenza	10
Measles	188
Mumps	29
Paratyphoid fever	1
Pneumonia (all forms)	44
Scarlet fever	68
Septic sore throat	2
Tuberculosis	32
Typhoid fever	8
Whooping cough	30
MASSACHUSETTS.	
Cerebrospinal meningitis	1
Chicken pox	159
Conjunctivitis (suppurative)	16
Diphtheria	124
German measles	65
Hookworm disease	1
Influenza	4
Lethargic encephalitis	1
Malaria	2
Measles	650
Mumps	198
Ophthalmia neonatorum	18
Pellagra	1
Pneumonia (lobar)	72
Poliomyelitis	3
Scarlet fever	282
Smallpox	1
Tetanus	1
Trichinosis	1
Tuberculosis (all forms)	141
Typhoid fever	10
Whooping cough	86
MICHIGAN.	
Diphtheria	61
Measles	421
Pneumonia	60
Scarlet fever	170
Smallpox	113
Tuberculosis	36
Typhoid fever	6
Whooping cough	38
MINNESOTA.	
Cerebrospinal meningitis	3
Chicken pox	112
Diphtheria	54
Influenza	1

MINNESOTA—continued.	Cases.
Lethargic encephalitis	1
Measles	133
Pneumonia	15
Scarlet fever	170
Smallpox	28
Tuberculosis	53
Typhoid fever	7
Whooping cough	14
MISSISSIPPI.	
Diphtheria	6
Scarlet fever	4
Smallpox	8
Typhoid fever	17
MISSOURI.	
(Exclusive of Cape Girardeau.)	
Cerebrospinal meningitis	1
Chicken pox	49
Diphtheria	62
Influenza	1
Measles	147
Mumps	81
Pneumonia	7
Scarlet fever	99
Septic sore throat	2
Smallpox	13
Trachoma	54
Tuberculosis	35
Typhoid fever	5
Whooping cough	42
MONTANA.	
Diphtheria	3
Rocky Mountain spotted fever:	
Anita	1
Coalwood	1
Laurel R. F. D.	1
Ryegate	1
Tyler	2
Scarlet fever	37
Smallpox	21
Typhoid fever	1
Tick paralysis—Roundup	1
NEBRASKA.	
Chicken pox	21
Diphtheria	6
Measles	17
Mumps	7
Scarlet fever	8
Smallpox	1
Tuberculosis	2
Whooping cough	1
NEW JERSEY.	
Cerebrospinal meningitis	2
Chicken pox	154
Diphtheria	77
Dysentery	1
Influenza	4
Measles	469
Pneumonia	115
Poliomyelitis	2
Scarlet fever	134
Typhoid fever	3
Whooping cough	163

[1] Week ended Friday.

Reports for Week Ended May 31, 1924—Continued.

NEW MEXICO.	Cases.
Chicken pox	3
Diphtheria	3
Measles	16
Mumps	1
Pneumonia	1
Scarlet fever	2
Smallpox	1
Tuberculosis	18
Typhoid fever	1
Whooping cough	1

NEW YORK. (Exclusive of New York City.)	
Cerebrospinal meningitis	2
Diphtheria	91
Influenza	23
Measles	934
Pneumonia	151
Poliomyelitis	1
Scarlet fever	244
Smallpox	1
Typhoid fever	17
Whooping cough	261

NORTH CAROLINA.	
Cerebrospinal meningitis	1
Chicken pox	87
Diphtheria	24
German measles	1
Measles	503
Poliomyelitis	1
Scarlet fever	42
Septic sore throat	2
Smallpox	75
Typhoid fever	16
Whooping cough	236

OREGON.	
Chicken pox	9
Diphtheria	12
Measles	28
Mumps	5
Pneumonia	[1]4
Scarlet fever:	
Silverton	9
Scattering	11
Smallpox:	
Portland	11
Scattering	3
Typhoid fever	1
Whooping cough	11

SOUTH DAKOTA.	
Chicken pox	12
Diphtheria	6
Measles	59
Mumps	1
Pneumonia	1
Scarlet fever	28
Typhoid fever	1
Whooping cough	6

TEXAS	
Anthrax	1
Cerebrospinal meningitis	1
Chicken pox	21
Diphtheria	19
Influenza	13

TEXAS—continued.	Cases.
Measles	102
Mumps	28
Pneumonia	10
Scarlet fever	7
Smallpox	35
Tuberculosis	16
Typhoid fever	5
Whooping cough	32

VERMONT.	
Chicken pox	25
Diphtheria	2
Measles	52
Mumps	4
Scarlet fever	15
Whooping cough	4

VIRGINIA	
Smallpox—Albemarle County	4

WASHINGTON.	
Chicken pox	96
Diphtheria	16
Measles	54
Mumps	12
Scarlet fever	38
Smallpox	23
Tuberculosis	42
Typhoid fever	4
Whooping cough	15

WEST VIRGINIA.	
Diphtheria	6
Scarlet fever	14
Smallpox	5

WISCONSIN.	
Milwaukee:	
Chicken pox	104
Diphtheria	12
Measles	22
Pneumonia	2
Scarlet fever	14
Tuberculosis	10
Typhoid fever	1
Whooping cough	16
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	133
Diphtheria	30
German measles	55
Influenza	50
Measles	374
Pneumonia	29
Scarlet fever	115
Smallpox	18
Tuberculosis	29
Typhoid fever	13
Whooping cough	127

WYOMING.	
Chicken pox	4
Measles	89
Mumps	16
Ophthalmia neonatorum	1
Pneumonia	1
Rocky Mountain spotted fever	3
Scarlet fever	1
Smallpox	1
Whooping cough	9

[1] Deaths.

SUMMARY OF MONTHLY REPORTS FROM STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
April, 1924.										
Colorado	1	213	8		1,705			162	3	3
Georgia		42	311	55	329	4		36	393	12
Hawaii	1	23	36		9					18
Iowa		52			299		2	207	71	
Kansas	3	116	27	0	3,308	0	3	284	239	17
Montana	2	37	1		552		4	109	88	6
Oregon		109	8		437			103	107	5
Virginia	6	96	2,578	99	2,648	9	5	138	27	46

Number of Cases of Certain Communicable Diseases Reported for the Month of March, 1924, by State Health Officers.

State.	Chickenpox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama	357	41	3,159	244	27	218	118	51	482
Arizona	31	18	473	21	34	6	78	1	2
Arkansas	135	22	1,829	145	20	37		12	192
California [1]									
Colorado	195	140	2,022	475	158	11	251	10	78
Connecticut	311	196	782	856	806	29	134	13	187
Delaware	25	17	35	24	59		15		13
Dist. of Columbia	289	31	59		169	40	117	7	53
Florida	81	53	652	75	32	11	136	34	35
Georgia	115	67	1,082	204	60	583	59	9	176
Idaho		12			30	8		7	
Illinois	1,471	671	2,659	2,081	1,509	95	1,111	43	680
Indiana	364	222	2,964		510	526		19	394
Iowa	59	77	862	232	287	66		[2]	66
Kansas	458	159	6,136	1,550	295	215	169	11	432
Kentucky [3]									
Louisiana	27	81	1,308	6	41	86		26	37
Maine		58			167	4		12	
Maryland	773	156	1,173	177	673	24	228	34	232
Massachusetts	1,121	648	4,052	1,779	2,103	1	649	24	422
Michigan	965	636	3,277	1,436	1,866	760	216	51	348
Minnesota	722	287	1,096		1,186	340	342	21	117
Mississippi	852	70	5,940	938	28	49	312	68	1,902
Missouri	234	257	1,847	432	665	231	105	25	309
Montana	63	56	1,269	16	107	111	54	3	55
Nebraska [1]									
Nevada [1]									
New Hampshire [4]									
New Jersey	1,041	448	2,735		810	41	447	21	477
New Mexico	77	49	1,212	40	35	6	61	5	15
New York	2,836	1,428	15,035	2,624	3,121	37	1,923	115	2,065
North Carolina	1,029	105	9,520		209	658		16	1,823
North Dakota	72	90	1,177	74	292	38	21	5	76
Ohio	1,514	628	2,231	2,468	1,636	741	708	75	1,156
Oklahoma	176	118	2,741	3	97	267	77	20	4
Oregon	81	121	1,000	34	66	117	65	14	41
Pennsylvania	3,216	1,280	3,695	3,450	2,154	20	546	74	1,663
Rhode Island	65	49	12	96	485		60		18
South Carolina	87	84	1,439	336	15	236	5	5	107
South Dakota	125	45	1,574	2	250	18	43	3	57
Tennessee	331	39	1,950		53	379		15	525
Texas [3]									
Utah [4]									
Vermont	104	11	762	79	51	14		1	128
Virginia	861	157	3,323		217	54		24	1,998
Washington	303	151	2,200	176	264	283	194	12	128
West Virginia	227	106	318		172	114	81	41	564
Wisconsin	1,016	286	1,908	67	1,414	138	159	17	741
Wyoming	43	5	513	8	23			6	33

[1] Reports not received at time of going to press.
[2] Reports not required by law.
[3] Reports received weekly.
[4] Reports received annually.

SUMMARY OF MONTHLY REPORTS FROM STATES—Continued.

Case Rates per 1,000 Population (Annual Basis) for the Month of March, 1924.

State.	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama	1.72	0.20	15.25	1.18	0.13	1.05	0.57	0.25	2.33
Arizona	.93	.54	14.16	.63	1.02	.18	2.34	.03	.06
Arkansas	.87	.14	11.77	.93	.13	.24	.....	.08	1.24
California [1]	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	2.29	1.65	23.76	5.58	1.86	.13	2.95	.12	.92
Connecticut	2.44	1.54	6.14	6.72	6.33	.23	1.05	.10	1.47
Delaware	1.27	.86	1.78	1.22	2.99	.....	.76	.....	.66
District of Columbia	7.80	.84	1.59	.....	4.56	1.08	3.16	.19	1.43
Florida	.89	.59	7.20	.83	.35	.12	1.50	.38	.39
Georgia	.45	.26	4.22	.80	.23	2.27	.23	.04	.69
Idaho	.....	.29	.....	.....	.74	.20	.....	.17	.....
Illinois	2.53	1.15	4.56	3.57	2.59	.16	1.91	.07	1.17
Indiana	1.42	.86	11.52	.....	1.98	2.04	.....	.07	1.53
Iowa	.28	.37	4.09	1.10	1.36	.31	.....	[4]	.31
Kansas	2.99	1.04	40.12	10.14	1.93	1.41	1.11	.07	2.82
Kentucky [2]	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana	.17	.51	8.28	.04	.26	.54	.....	.16	.23
Maine	.....	.88	.....	.....	2.53	.06	.....	.18	.....
Maryland	6.00	1.21	9.10	1.37	5.22	.19	1.77	.26	1.80
Massachusetts	3.25	1.88	11.73	5.15	6.09	.00	1.88	.07	1.22
Michigan	2.80	1.85	9.51	4.17	5.42	2.21	.63	.15	1.01
Minnesota	3.37	1.34	5.11	.....	5.53	1.59	1.60	.10	.55
Mississippi	5.62	.46	39.17	6.18	.18	.32	2.06	.45	12.54
Missouri	.80	.88	6.31	1.48	2.27	.79	.36	.09	1.03
Montana	1.18	1.05	23.82	.30	2.01	2.08	1.01	.06	1.03
Nebraska [1]	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada [3]	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire [4]	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Jersey	3.57	1.54	9.38	.....	2.78	.14	1.53	.07	1.64
New Mexico	2.42	1.54	38.09	1.26	1.10	.19	1.92	.16	.47
New York	3.05	1.54	16.17	2.82	3.36	.04	2.07	.12	2.22
North Carolina	4.46	.46	41.28	.....	.91	2.85	.....	.07	7.91
North Dakota	1.25	1.56	20.46	1.29	5.08	.66	.37	.09	1.32
Ohio	2.87	1.19	4.24	4.69	3.11	1.41	1.34	.14	2.19
Oklahoma	.94	.63	14.71	.02	.52	1.43	.41	.11	.02
Oregon	1.15	1.71	14.15	.48	.93	1.65	.92	.20	.58
Pennsylvania	4.12	1.64	4.74	4.42	2.76	.03	.70	.09	2.13
Rhode Island	1.21	.91	.22	1.79	9.05	.....	1.12	.....	.34
South Carolina	.58	.56	9.64	2.25	.10	1.58	.03	.03	.72
South Dakota	2.23	.80	28.12	.04	4.47	.32	.77	.05	1.02
Tennessee	1.62	.19	9.56	.....	.26	1.86	.....	.07	2.57
Texas [3]	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah [4]	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vermont	3.48	.37	25.53	2.65	1.71	.47	.....	.03	4.29
Virginia	4.19	.76	16.19	.....	1.06	.26	.....	.12	9.73
Washington	2.46	1.22	17.84	1.43	2.14	2.29	1.57	.10	1.04
West Virginia	1.70	.79	2.38	.....	1.29	.85	.61	.31	4.22
Wisconsin	4.33	1.22	8.13	.29	6.03	.59	.68	.07	3.16
Wyoming	2.34	.27	27.93	.44	1.25	.....	.....	.33	1.80

[1] Reports not received at time of going to press.
[2] Reports not required by law.
[3] Reports received weekly.
[4] Reports received annually.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES.

Diphtheria.—For the week ended May 17, 1924, 35 States reported 1,540 cases of diphtheria. For the week ended May 19, 1923, the same States reported 1,460 cases. One hundred and one cities, situated in all parts of the country and having an aggregate population of about 28,600,000, reported 916 cases of diphtheria for the week ended May 17, 1924. Last year for the corresponding week they reported 935 cases. The estimated expectancy for these cities was 999 cases. The estimated expectancy was based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty States reported 9,826 cases of measles for the week this year, and 23,191 cases for the week last year. One hundred and one cities reported 4,003 cases of measles for the week this year, and 9,463 cases last year.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-five States—this year, 3,170 cases; last year, 3,132 cases. One hundred and one cities—this year, 1,476 cases; last year, 1,569 cases; estimated expectancy, 922 cases.

Smallpox.—The reports of smallpox continue to show that there is much needless suffering and many deaths in widely separated communities caused by neglect of vaccination and revaccination. Thirty-five States reported 1,233 cases of smallpox for the week this year, and 469 cases for the corresponding week of last year. One hundred and one cities reported 522 cases for the week this year, and 90 cases last year. The estimated expectancy for these cities was 182 cases.

Typhoid fever.—This disease was reported for the week as follows: Thirty-three States—235 cases this year; 245 cases last year. One hundred and one cities—71 cases this year; 62 cases last year. The estimated expectancy for these cities was 80 cases.

City reports for week ended May 17, 1924.

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
NEW ENGLAND.										
Maine:										
Lewiston	2	1	2	0	0	18	1	0	5	2
Portland	3	1	3	0	0	3	49	2	3	0
New Hampshire:										
Concord	0	0	0	0	0	12	0	1	1	0
Nashua	0	1	0	0	0	0	0	1	1	1
Vermont:										
Barre	0	0	0	0	0	0	0	0	2	0
Burlington	2	1	1	0	0	4	0	0	1	0
Massachusetts:										
Boston	26	54	44	5	0	164	34	23	46	101
Fall River	1	3	4	0	0	24	5	4	3	9
Springfield	2	3	4	0	0	16	4	2	5	12
Worcester	7	4	8	5	0	9	16	3	6	13
Rhode Island:										
Pawtucket	0	1	1	0	0	1	0	2	1	7
Providence	0	10	7	0	0	1	0	4	9	36
Connecticut:										
Bridgeport	0	5	2	1	1	1	0	4	4	5
Hartford	1	6	5	0	0	21	21	2	3	22
New Haven	6	4	0	0	0	19	33	5	4	8

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria. Cases, estimated expectancy.	Diphtheria. Cases reported.	Influenza. Cases reported.	Influenza. Deaths reported.	Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever. Cases, estimated expectancy.	Scarlet fever. Cases reported.
MIDDLE ATLANTIC.										
New York:										
Buffalo	0	12	16	0	0	33	0	5	19	18
New York	202	305	221	15	14	1,362	152	199	186	268
Rochester	5	8	0	0	0	26	24	7	12	13
Syracuse	6	7	9	0	0	54	3	10	10	20
New Jersey:										
Camden		4	7	0	0	2		5	2	8
Newark	39	17	12	1	0	199	76	12	18	30
Trenton	1	4	8		1	14	0	5	3	0
Pennsylvania:										
Philadelphia	99	63	59		7	150	100	51	69	69
Pittsburgh	33	20	21		3	24	142	47	19	23
Reading	5	2	4	0	0	4	40	2	2	3
Scranton	3	3	3	0	0	3	1	2	2	0
E. NORTH CENTRAL.										
Ohio:										
Cincinnati	17	10	1	1	0	71	12	5	9	10
Cleveland	72	19	16	3	3	109	196	26	24	9
Columbus	9	2	5	0	0	0	2	3	4	19
Toledo	26	4	4		2	115	1	7	11	18
Indiana:										
Fort Wayne		3							1	
Indianapolis		8	1	0	0	68		6	18	8
South Bend		1	3	0	0	11		1	2	11
Terre Haute	4	1	0	0	0	0	0	2	3	6
Illinois:										
Chicago	114	117	66	12	2	366	99	48	91	*123
Cicero	0	3	0	0	0	2	20	1	1	1
Springfield	11	1	0	0	0	5	1	1	2	3
Michigan:										
Detroit	88	57	47	5	0	153	114	35	66	89
Flint	20	4	6	0	0	2	14	2	5	6
Grand Rapids	8	3	1	0	0	6	18	0	6	18
Saginaw	8	1	0	0	0	21	1	1	2	21
Wisconsin:										
Madison	5	1	2	0	0	1	0	0	2	8
Milwaukee	138	11	15	0	0	39	0	0	27	17
Racine		1							5	
Superior		1	0	0	0	0		1	2	1
W. NORTH CENTRAL.										
Minnesota:										
Duluth	13	2	0	0	0	9	2	5	4	32
Minneapolis	86	15	24		2	24	13	14	27	43
St. Paul		14	33		1	13		6	17	27
Iowa:										
Des Moines	1	1	1	0		0	0		9	3
Sioux City	0	1	2	0		2	0		3	2
Waterloo	1	0	0	0		3	17		2	1
Missouri:										
Kansas City	4	7	3	1	1	33	12	7	9	10
St. Joseph	3	1	2	0	0	2	7	0	2	4
St. Louis		47	43	0	0	61			26	86
North Dakota:										
Fargo	0	1	0	0	0	0	0	1	1	0
Grand Forks	1	1	0	0	0	4	0	0	1	0
South Dakota:										
Aberdeen	3		0	0	0	15	0	0		0
Sioux Falls	5	0	0	0	0	0	0	0	2	5
Nebraska:										
Lincoln		1	6	0	0	1		2	2	1
Omaha	6	3	2	0	0	23	1	8	10	2
Kansas:										
Topeka	11	1	1	0	0	18	5	0	2	6
Wichita	2	1	1	0	0	5	40	0	3	4

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
SOUTH ATLANTIC.										
Delaware:										
Wilmington	----	1	----	----	----	----	----	----	3	----
Maryland:										
Baltimore	93	18	25	5	3	274	31	33	22	50
Cumberland	----	1	1	1	0	0	----	0	1	1
Frederick	0	0	0	0	0	0	0	0	0	4
District of Columbia:										
Washington	43	11	6	1	1	27	----	16	14	20
Virginia:										
Lynchburg	1	0	0	0	0	0	9	0	1	0
Norfolk	15	1	1	0	0	19	2	2	1	1
Richmond	17	1	0	0	0	93	0	4	2	2
Roanoke	2	1	1	0	0	0	4	4	1	3
West Virginia:										
Charleston	1	1	0	0	0	13	3	0	1	3
Huntington	0	0	0	0	0	0	0	0	0	0
Wheeling	4	1	1	0	0	4	2	2	1	9
North Carolina:										
Raleigh	17	1	0	0	0	6	0	4	0	0
Wilmington	7	0	0	0	0	12	3	0	0	0
Winston-Salem	9	0	0	----	1	2	7	3	1	16
South Carolina:										
Charleston	0	0	0	0	0	0	0	1	0	0
Columbia	3	1	1	0	0	4	9	0	0	0
Greenville	0	0	0	0	0	2	0	2	0	0
Georgia:										
Atlanta	0	1	1	0	0	0	5	11	3	6
Brunswick	2	0	0	0	0	0	0	0	1	0
Savannah	5	0	1	0	0	4	1	3	1	0
Florida:										
St. Petersburg	0	----	0	0	0	0	0	0	----	0
Tampa	0	1	0	0	0	2	0	1	1	0
EAST SOUTH CENTRAL.										
Kentucky:										
Covington	0	1	0	1	0	8	1	0	1	2
Lexington	----	0	0	0	0	4	----	2	0	1
Louisville	1	5	1	1	2	6	2	4	5	3
Tennessee:										
Memphis	5	2	1	----	1	15	118	8	3	3
Nashville	1	1	1	0	0	8	0	3	2	0
Alabama:										
Birmingham	3	1	0	2	1	11	29	5	2	1
Mobile	0	0	0	0	0	6	0	2	0	0
Montgomery	----	0	0	0	0	2	----	0	1	0
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith	4	1	0	0	----	8	5	----	0	1
Little Rock	1	1	0	0	0	10	1	3	1	1
Louisiana:										
New Orleans	5	6	10	----	2	13	0	9	2	8
Shreveport	0	----	2	0	0	0	0	2	----	0
Oklahoma:										
Oklahoma	0	1	0	----	1	2	0	2	2	0
Texas:										
Dallas	6	3	3	1	1	12	29	2	2	1
Galveston	0	0	0	0	0	4	0	0	0	0
Houston	----	2	1	0	0	2	----	4	1	3
San Antonio	0	1	0	0	0	2	0	7	1	0
MOUNTAIN.										
Montana:										
Billings	4	0	0	0	0	3	0	1	1	0
Great Falls	0	1	2	0	0	2	0	0	1	1
Helena	1	----	0	0	0	0	0	1	----	5
Missoula	1	0	0	0	0	0	0	0	0	1

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
MOUNTAIN—contd.										
Idaho:										
Boise	2	1	1	0	0	6	0	0	2	
Colorado:										
Denver	32	9	14	-------	1	69	10	8	10	16
Pueblo	4	1	0	0	0	7	5	0	1	1
New Mexico:										
Albuquerque	0	2	0	1	1	11	0	1	1	0
Utah:										
Salt Lake City	35	3	1	0	0	12	3	3	3	1
Nevada:										
Reno	0	0	0	0	0	1	0	0	1	0
PACIFIC										
Washington:										
Seattle	38	5	10	0	-------	11	7	-------	6	14
Spokane	1	3	3	0	-------	0	0	-------	4	22
Tacoma	3	2	1	0	-------	4	5	-------	1	2
Oregon:										
Portland	3	3	4	0	0	3	2	6	9	3
California:										
Los Angeles	97	24	65	1	1	183	7	15	11	43
Sacramento	3	2	13	0	0	8	0	0	1	4
San Francisco	66	23	46	0	0	24	16	5	13	28

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
NEW ENGLAND.										
Maine:										
Lewiston	33,790	0	0	0	1	0	0	0	0	11
Portland	73,129	0	0	0	1	0	0	0	2	28
New Hampshire:										
Concord	22,408	0	0	0	0	0	0	0	0	10
Nashua	29,234	0	0	0	1	0	0	0	0	12
Vermont:										
Barre	[1] 10,008	0	0	0	2	0	0	0	0	3
Burlington	23,613	0	0	0	0	0	0	0	0	3
Massachusetts:										
Boston	770,409	0	0	0	16	3	2	0	13	238
Fall River	120,912	0	0	0	1	1	0	0	10	31
Springfield	144,227	0	0	0	2	0	0	0	0	38
Worcester	191,927	0	0	0	2	0	0	0	0	50
Rhode Island:										
Pawtucket	68,790	0	0	0	0	0	0	0	0	14
Providence	242,378	0	0	0	5	0	0	0	3	72
Connecticut:										
Bridgeport	[1] 143,555	0	0	0	1	0	0	0	2	29
Hartford	[1] 138,036	0	0	0	1	0	0	0	2	42
New Haven	172,967	0	0	0	2	0	0	0	2	37
MIDDLE ATLANTIC.										
New York:										
Buffalo	536,718	0	0	0	16	1	2	0	31	141
New York	5,927,625	0	0	0	[2] 117	11	17	1	175	1,418
Rochester	317,867	0	0	0	4	0	1	0	1	72
Syracuse	184,511	0	0	0	3	0	0	0	3	47

[1] Population Jan. 1, 1920.

[2] Pulmonary only.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
MIDDLE ATLANTIC—continued.										
New Jersey:										
Camden	124,157	0	0	0	2	0	2	0	----	36
Newark	438,699	0	0	0	15	1	0	0	40	111
Trenton	127,390	0	0	0	4	1	0	0	8	43
Pennsylvania:										
Philadelphia	1,922,788	0	5	0	36	8	10	2	68	473
Pittsburgh	613,442	0	0	0	13	2	0	0	52	209
Reading	110,917	0	0	0	2	0	0	0	6	32
Scranton	140,636	0	0	0	2	0	0	0	6	----
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati	406,312	1	4	0	14	1	1	0	24	116
Cleveland	888,519	1	1	0	12	2	2	0	96	205
Columbus	261,082	1	7	0	7	1	0	0	8	58
Toledo	268,338	4	25	0	5	0	0	0	31	61
Indiana:										
Fort Wayne	93,573	3	----	----	----	0	----	----	----	----
Indianapolis	342,718	8	49	0	7	1	0	0	----	93
South Bend	76,709	0	0	0	0	0	0	0	----	19
Terre Haute	68,939	0	0	0	0	0	0	0	1	19
Illinois:										
Chicago	2,886,121	2	10	0	58	3	4	0	40	663
Cicero	55,968	0	0	0	1	0	0	0	1	13
Springfield	61,833	1	0	0	2	0	0	0	2	23
Michigan:										
Detroit	995,668	10	118	15	27	4	3	0	36	306
Flint	117,968	2	11	2	0	1	1	0	1	24
Grand Rapids	145,947	1	0	0	2	1	0	0	4	30
Saginaw	69,754	0	0	0	2	1	0	0	1	23
Wisconsin:										
Madison	42,519	1	0	0	0	0	0	0	14	6
Milwaukee	484,595	4	0	0	8	1	0	0	26	88
Racine	64,393	0	----	----	----	0	----	----	----	----
Superior	[1] 39,671	1	3	0	0	0	0	0	----	11
WEST NORTH CENTRAL.										
Minnesota:										
Duluth	106,289	2	4	1	0	1	0	0	1	26
Minneapolis	409,125	19	4	1	6	1	0	0	4	130
St. Paul	241,891	9	22	0	9	0	0	0	----	66
Iowa:										
Des Moines	140,923	3	3	----	----	0	0	----	0	----
Sioux City	79,662	2	0	----	----	0	0	----	0	----
Waterloo	39,667	1	0	----	----	1	0	----	0	----
Missouri:										
Kansas City	351,819	7	0	0	4	1	1	0	10	66
St. Joseph	78,232	10	0	0	1	0	0	0	0	27
St. Louis	803,853	9	0	0	14	2	2	1	----	185
North Dakota:										
Fargo	24,841	0	0	0	2	0	0	0	0	12
Grand Forks	14,547	0	0	0	0	0	0	0	0	----
South Dakota:										
Aberdeen	15,829	----	0	0	0	----	0	0	1	----
Sioux Falls	29,206	1	1	0	0	0	0	0	0	6
Nebraska:										
Lincoln	58,761	3	0	0	0	0	0	0	----	14
Omaha	204,382	9	4	0	1	0	0	0	0	59
Kansas—										
Topeka	52,555	0	0	0	1	0	0	0	1	12
Wichita	79,261	6	4	0	1	0	0	0	5	27
SOUTH ATLANTIC.										
Delaware:										
Wilmington	117,728	0	----	----	----	0	----	----	----	----
Maryland:										
Baltimore	773,580	0	1	0	15	5	1	1	25	243
Cumberland	32,361	0	0	0	0	0	0	0	----	10
Frederick	11,301	0	0	0	0	1	0	0	0	4

[1] Population Jan. 1, 1920.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
SOUTH ATLANTIC—continued.										
District of Columbia:										
Washington	[1] 437,571	1	7	0	9	2	0	0	11	136
Virginia:										
Lynchburg	30,277	0	0	0	0	0	1	0	4	10
Norfolk	159,089	1	0	0	5	1	0	0	1	----
Richmond	181,044	0	0	0	3	0	1	0	7	50
Roanoke	55,502	1	0	0	0	0	0	0	2	13
West Virginia:										
Charleston	45,597	1	1	0	2	0	1	0	1	23
Huntington	57,918	0	1	0	0	1	0	0	0	----
Wheeling	[1] 56,208	0	0	0	0	0	1	1	1	17
North Carolina:										
Raleigh	29,171	0	10	0	1	0	0	0	1	8
Wilmington	35,719	0	0	0	0	0	0	0	0	11
Winston-Salem	56,230	3	3	0	1	0	0	0	0	22
South Carolina:										
Charleston	71,245	0	4	0	5	1	0	0	0	30
Columbia	39,688	0	0	0	0	1	1	0	1	20
Greenville	25,789	0	5	0	0	1	0	0	5	3
Georgia:										
Atlanta	222,963	5	20	0	4	0	0	0	----	71
Brunswick	15,937	0	0	0	1	0	0	0	0	6
Savannah	89,448	1	0	0	3	2	1	0	0	29
Florida:										
St. Petersburg	24,403	----	0	0	2	----	0	0	1	9
Tampa	56,059	0	0	0	1	1	1	0	0	14
EAST SOUTH CENTRAL.										
Kentucky:										
Covington	57,877	0	0	0	2	1	0	0	0	19
Lexington	43,673	0	0	0	1	0	0	0	----	16
Louisville	257,671	2	0	0	4	2	2	0	0	72
Tennessee:										
Memphis	170,067	2	0	0	3	1	1	0	15	49
Nashville	121,128	0	2	0	3	1	3	0	0	51
Alabama:										
Birmingham	195,901	1	49	0	8	2	0	0	10	66
Mobile	63,858	1	1	0	0	0	0	0	0	21
Montgomery	45,383	1	2	0	2	0	1	0	----	13
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith	30,635	0	0	----	----	0	0	----	1	----
Little Rock	70,916	1	0	0	0	0	0	0	0	----
Louisiana:										
New Orleans	404,575	5	1	0	14	3	3	0	2	132
Shreveport	54,590	----	5	0	1	----	0	0	0	26
Oklahoma:										
Oklahoma	101,150	4	2	0	1	0	1	0	----	19
Texas:										
Dallas	177,274	3	0	0	7	0	0	0	1	49
Galveston	46,877	0	0	0	1	1	0	0	0	8
Houston	154,970	1	1	0	5	0	0	0	----	42
San Antonio	184,727	0	0	0	12	1	0	0	0	80
MOUNTAIN.										
Montana:										
Billings	16,927	0	0	0	0	0	0	0	0	10
Great Falls	27,787	3	1	0	0	0	0	0	5	5
Helena	[1] 12,037	----	0	0	0	----	0	0	0	7
Missoula	[1] 12,668	1	4	0	0	0	0	0	0	2
Idaho:										
Boise	22,806	0	1	0	0	0	0	0	0	4
Colorado:										
Denver	272,031	10	0	0	8	0	0	0	13	63
Pueblo	43,519	0	0	0	3	0	0	0	0	10
New Mexico:										
Albuquerque	16,648	0	0	0	3	0	0	0	0	9

[1] Population Jan. 1, 1920.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Tuberculosis, deaths reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
MOUNTAIN—continued.										
Utah:										
Salt Lake City	126,241	5	0	0	4	0	0	0	1	44
Nevada:										
Reno	12,429	0	0	0	0	0	0	0	0	6
PACIFIC.										
Washington:										
Seattle	[1] 315,685	6	1	------	------	0	0	------	2	------
Spokane	104,573	13	13	------	------	0	0	------	0	------
Tacoma	101,731	1	1	------	------	0	2	------	3	------
Oregon:										
Portland	273,621	8	3	0	3	1	0	0	0	50
California:										
Los Angeles	666,853	2	137	0	22	2	4	1	7	202
Sacramento	69,950	0	0	0	4	1	0	0	0	30
San Francisco	539,038	1	2	0	4	2	0	0	4	156

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, est. expectancy.	Cases.	Deaths.
NEW ENGLAND.									
New Hampshire:									
Concord	0	1	0	0	0	0	0	0	0
Vermont:									
Burlington	0	0	0	0	0	0	0	1	0
Massachusetts:									
Boston	0	0	0	0	0	0	0	1	0
Rhode Island:									
Pawtucket	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC.									
New York:									
New York	4	0	3	0	1	1	1	0	0
New Jersey:									
Newark	2	0	6	0	0	0	0	0	0
Trenton	0	0	0	0	0	0	0	1	0
Pennsylvania:									
Philadelphia	0	0	1	0	0	0	0	1	0
EAST NORTH CENTRAL.									
Ohio:									
Cleveland	1	1	2	0	0	0	0	0	0
Illinois:									
Chicago	0	0	1	0	0	0	1	0	0
Michigan:									
Detroit	1	0	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee	0	1	0	0	0	0	1	0	0
Superior	0	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL.									
Nebraska:									
Omaha	0	0	1	1	0	0	0	0	0

[1] Population Jan. 1, 1920.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, est. expectancy.	Cases.	Deaths.
SOUTH ATLANTIC.									
Maryland:									
Baltimore	0	0	1	1	0	0	0	1	0
District of Columbia:									
Washington	0	0	0	0	0	0	0	1	1
Virginia:									
Lynchburg	0	0	0	0	0	1	0	0	0
Richmond	0	0	0	0	1	0	0	0	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston	0	0	0	0	0	1	0	0	0
Columbia	0	0	0	0	0	2	0	0	0
Georgia:									
Savannah	0	0	0	0	2	2	0	0	0
Florida:									
Tampa	1	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL.									
Alabama:									
Mobile	0	0	0	1	0	1	0	0	0
WEST SOUTH CENTRAL.									
Arkansas:									
Little Rock	0	0	1	1	0	0	0	0	0
Louisiana:									
New Orleans	0	0	0	0	1	0	0	0	0
Texas:									
Dallas	0	0	0	0	0	1	0	0	0
Houston	0	0	0	0	0	1	0	0	0
San Antonio	0	1	0	1	0	1	0	0	0
PACIFIC.									
California:									
Los Angeles	0	0	0	0	1	0	0	0	0

The following table gives a summary of the reports from 105 cities for the nine-week period ended May 17, 1924. The cities included in this table are those whose reports have been published for all nine weeks in the Public Health Reports. Eight of these cities did not report deaths. The aggregate population of the cities reporting cases was estimated at nearly 29,000,000 on July 1, 1923, which is the latest date for which estimates are available. The cities reporting deaths had more than 28,000,000 population on that date. The number of cities included in each group and the aggregate population are shown in a separate table below.

Summary of weekly reports from cities, March 16 to May 17, 1924.

DIPHTHERIA CASES.

	1924, week ended—								
	Mar. 22.	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.
Total	1,113	1,038	1,039	1,006	1,009	988	897	894	929
New England	135	103	105	102	99	111	97	83	78
Middle Atlantic	415	391	383	384	374	400	344	395	357
East North Central	229	200	219	210	211	156	173	157	[1] 168
West North Central	86	66	74	60	60	71	68	64	110
South Atlantic	61	42	61	52	52	50	[2] 40	[2] 31	[2] 41
East South Central	17	10	17	8	14	13	6	8	3
West South Central	21	32	23	24	31	33	18	[3] 25	16
Mountain	25	31	30	40	52	31	35	29	18
Pacific	124	163	127	126	116	123	[4] 116	[5] 102	138

MEASLES CASES.

Total	7,026	6,590	6,070	6,237	5,147	5,203	4,768	4,431	4,012
New England	430	443	374	401	353	354	379	339	271
Middle Atlantic	2,467	2,354	2,394	2,647	2,347	2,184	2,310	1,889	1,868
East North Central	659	674	806	838	675	829	703	862	[1] 776
West North Central	925	766	569	415	359	350	257	274	197
South Atlantic	675	621	572	626	487	518	[2] 484	[2] 455	[2] 463
East South Central	231	173	126	156	159	173	98	73	56
West South Central	514	590	354	323	188	127	104	[3] 70	51
Mountain	634	444	405	241	179	193	113	97	100
Pacific	491	525	470	590	400	475	[4] 320	[5] 372	230

SCARLET FEVER CASES.

Total	1,928	1,966	1,737	1,796	1,658	1,532	1,621	1,563	1,515
New England	337	363	312	326	253	271	242	210	213
Middle Atlantic	532	532	517	498	474	467	473	470	452
East North Central	376	370	346	345	334	284	325	318	[1] 343
West North Central	270	254	184	230	222	195	197	219	223
South Atlantic	221	202	200	218	189	168	[2] 178	[2] 165	[2] 123
East South Central	17	30	11	18	16	12	16	19	9
West South Central	13	17	15	26	27	18	23	[3] 15	14
Mountain	22	28	16	20	19	23	27	37	25
Pacific	140	170	136	115	124	94	[4] 140	[5] 110	113

SMALLPOX CASES.

Total	565	602	544	536	467	568	550	465	528
New England	0	0	0	1	1	0	0	0	0
Middle Atlantic	0	6	1	1	0	0	0	0	5
East North Central	186	162	153	141	164	193	186	165	[1] 212
West North Central	77	72	52	61	41	62	53	33	39
South Atlantic	123	171	116	98	93	98	[2] 76	[2] 95	[2] 51
East South Central	25	38	49	45	26	55	49	20	54
West South Central	6	7	10	4	5	2	4	[3] 1	7
Mountain	4	7	8	4	10	6	5	6	6
Pacific	144	139	155	181	127	152	[4] 177	[5] 145	154

[1] Figures for Fort Wayne, Ind., and Racine, Wis., estimated. Reports not received at time of going to press.
[2] Figures for Wilmington, Del., estimated.
[3] Figures for San Antonio, Tex., estimated.
[4] Figures for San Francisco, Calif., estimated.
[5] Figures for San Francisco, Calif., and Spokane, Wash., estimated.

Summary of weekly reports from cities, March 16 to May 17, 1924—Continued.

TYPHOID FEVER CASES.

	1924, week ended—								
	Mar. 22.	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.
Total	60	76	51	52	55	58	49	69	73
New England	2	4	1	4	4	7	4	9	2
Middle Atlantic	19	26	9	21	17	11	10	25	32
East North Central	8	7	7	7	7	10	11	9	[1] 12
West North Central	5	5	7	2	6	1	3	2	3
South Atlantic	1	11	9	10	4	8	[2] 11	[2] 11	[2] 8
East South Central	13	10	1	1	4	8	3	3	7
West South Central	2	8	9	2	4	6	3	[3] 3	3
Mountain	1	1	2	1	4	0	1	3	0
Pacific	9	4	6	4	5	7	[4] 3	[5] 4	6

INFLUENZA DEATHS.

Total	85	96	97	95	80	72	51	60	49
New England	5	3	6	3	3	3	2	2	1
Middle Atlantic	28	45	44	35	31	30	21	32	25
East North Central	13	11	20	25	14	12	7	10	[1] 5
West North Central	3	4	2	8	4	4	3	3	4
South Atlantic	15	10	3	7	6	10	[2] 5	[2] 7	[2] 5
East South Central	9	8	13	6	11	8	3	4	4
West South Central	8	10	6	3	4	3	4	[3] 0	3
Mountain	2	2	1	2	4	2	0	1	1
Pacific	2	3	2	6	3	0	[4] 6	[5] 1	1

PNEUMONIA DEATHS.

Total	1,173	1,204	1,251	1,222	1,101	959	941	783	743
New England	67	58	75	71	61	63	69	55	52
Middle Atlantic	495	525	500	494	474	430	392	332	343
East North Central	226	255	286	258	232	170	199	150	[1] 136
West North Central	54	72	71	74	64	49	53	42	41
South Atlantic	152	111	125	158	118	114	[2] 100	[2] 96	[2] 89
East South Central	69	47	61	53	57	42	44	29	22
West South Central	56	61	67	43	43	35	24	[3] 23	27
Mountain	20	37	39	32	25	26	27	24	13
Pacific	34	38	27	39	27	30	[4] 33	[5] 32	20

[1] Figures for Fort Wayne, Ind., and Racine, Wis., estimated. Reports not received at time of going to press.
[2] Figures for Wilmington, Del., estimated.
[3] Figures for San Antonio, Tex., estimated.
[4] Figures for San Francisco, Calif., estimated.
[5] Figures for San Francisco, Calif., and Spokane, Wash., estimated.

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923.

Group of cities.	Number of cities reporting cases.	Number of cities reporting deaths.	Aggregate population of cities reporting cases.	Aggregate population of cities reporting deaths.
Total	105	97	28,898,350	28,140,934
New England	12	12	2,098,746	2,098,746
Middle Atlantic	10	10	10,304,114	10,304,114
East North Central	17	17	7,032,535	7,032,535
West North Central	14	11	2,515,330	2,381,454
South Atlantic	22	22	2,566,901	2,566,901
East South Central	7	7	911,885	911,885
West South Central	8	6	1,124,564	1,023,013
Mountain	9	9	546,445	546,445
Pacific	6	3	1,797,830	1,275,841

FOREIGN AND INSULAR.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	May 11–20, 1924.		Remaining under treatment May 20, 1924.
	New cases.	Deaths.	
Cerebrospinal meningitis			[1] 2
Chicken pox	8		10
Diphtheria	8	1	5
Leprosy	1		15
Malaria	10		[2] 19
Measles	1		5
Paratyphoid fever			1
Scarlet fever			1
Typhoid fever	11	2	[3] 29

[1] From the interior, 1.
[2] From the interior, 12.
[3] From the interior, 16.

EGYPT.

Plague—Summary.

During the period January 1 to April 29, 1923, 178 cases of plague with 94 deaths were reported in Egypt. Of these, 1 case with 1 death occurred at Alexandria, 1 case at Port Said, and 8 cases with 4 deaths at Suez. The remaining cases were distributed in 9 Provinces. For distribution of occurrence according to locality, see page 1405.

JAMAICA.

Smallpox (Reported as Alastrim).

During the week ended May 3, 1924, 25 new cases of smallpox (alastrim) were reported in the Island of Jamaica.

Chicken Pox.

During the period under report eight new cases of chicken pox were reported in the Island of Jamaica.

MADAGASCAR

Plague—March 1–15, 1924.

During the period March 1 to 15, 1924, 123 cases of plague with 123 deaths were reported in the Island of Madagascar. The occurrence was among natives in the Province of Tananarive. For distribution of occurrence according to localities see page 1405.

MALTA.

Communicable Diseases—April 1-15, 1924.

Communicable diseases were reported in the island of Malta during the period April 1 to 15, 1924, as follows:

Disease.	Cases.	Remarks.	Disease.	Cases.	Remarks.
Broncho-pneumonia	1		Pneumonia	3	
Chicken pox	2		Trachoma	10	
Influenza	3		Tuberculosis	5	
Malaria	1	Contracted abroad.	Typhoid fever	5	
Measles	51		Undulant fever	21	
			Whooping cough	5	

NETHERLANDS.

Typhus Fever—Amsterdam.

During the week ended April 26, 1924, two cases of typhus fever were reported at Amsterdam, Netherlands.

UNION OF SOUTH AFRICA.

Status of Plague.

During the week ended April 12, 1924, 18 new cases of plague, occurring in natives, with 10 deaths, were reported in the Union of South Africa. The occurrence was distributed in the Cape Province, in two districts; Orange Free State, in five districts; and the Transvaal, at Vlakfontein, Krugersdorp district. Five deaths of cases reported during the week ended April 5, 1924, were reported. Total from December 16, 1923, to April 12, 1924: Cases, white 41, colored 243; total, 284. Deaths, white 21, colored 153; total, 174.

WEST AFRICA (FRENCH DAHOMEY).

Yellow Fever—Porto Novo.

Under date of May 26, the appearance of yellow fever was reported at Porto Novo, French Dahomey, West Africa.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended June 6, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Mar. 23-29, 1924: Cases, 6,719; deaths, 3,861.
Rangoon	Apr. 6-19	4	4	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended June 6, 1924—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Porto Alegre	Apr. 20–26		2	
Ceylon:				
Colombo	Apr. 13–19	8	8	
Egypt				Jan. 1–May 1, 1924: Cases, 178; deaths, 94.
City—				
Alexandria	Apr. 2	1	1	
Port Said	Apr. 24	1		
Suez	Jan. 2–Apr. 28	8	4	
Province—				
Assiout	Apr. 1–May 1	27	19	
Charkieh	Jan. 31	1	1	
Fayoum	Feb. 18–May 1	46	8	
Gharbieh	Apr. 21	1	1	
Girgeh	Jan. 17–Apr. 25	7	2	
Kalioubieh	Jan. 6	1		
Kena	Apr. 9–29	41	29	
Menoufieh	Jan. 2–Apr. 21	38	24	
Minia	Feb. 5–Apr. 8	6	5	
India				Mar. 23–29, 1924: Cases, 15,356; deaths, 11,798.
Karachi	Apr. 20–26	25	19	
Rangoon	Apr. 6–19	27	23	
Madagascar:				
Tananarive Province				Mar. 15, 1924: Cases, 123; deaths, 123. Bubonic, pneumonic, septicemic.
Tananarive Town	Mar. 1–15	14	14	
Other localities	do	109	109	
Straits Settlements:				
Singapore	Apr. 6–12	2	1	
Union of South Africa				Apr. 6–12, 1924: Cases, 18; deaths, 10. In natives. Five deaths in cases reported previous week. Total, Dec. 16, 1923–Apr. 12, 1924: Cases, 284 (white, 41); deaths, 174 (white, 21).

SMALLPOX.

Algeria:				
Algiers	Apr. 1–30	1		
British East Africa:				
Northern Rhodesia	Apr. 1–7	1		
Canada:				
Alberta—				
Calgary	May 11–17	2		
British Columbia—				
Vancouver	May 11–17	33		
Ontario—				
Ottawa	May 11–17	1		
China:				
Amoy	Apr. 6–19		2	
Antung	Apr. 14–May 4	3		
Chungking	Apr. 6–12			Prevalent.
Egypt:				
Cairo	Feb. 4–11	2		
Port Said	Apr. 16–22	2		Imported.
Finland				Apr. 1–15, 1924: Cases, 1.
India				Mar. 23–29, 1924: Cases, 4,215; deaths, 932.
Karachi	Apr. 20–26	22	11	
Madras	Apr. 13–19	37	11	
Rangoon	Apr. 6–19	20	6	
Jamaica				Apr. 27–May 3, 1924: Cases, 25.
Japan:				
Kobe	May 6–12	1		
Java:				
East Java—				
Soerabaya	Mar. 16–22	19	9	
West Java—				
Batavia	Apr. 5–11	19		Province.
Mexico:				
Guadalajara	May 4–17		3	
Mexico City	Apr. 13–19	7		Including municipalities in Federal District.
Salina Cruz	Apr. 24–30	3	1	Five cases chickenpox in quarantine.
Tampico	May 11–20	2	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon	Apr. 27–May 3	1		
Oporto	Apr. 27–May 3	3	1	
Siam:				
Bangkok	Mar. 30–Apr. 5	2		
Spain:				
Valencia	May 4–10	13		
Tunis:				
Tunis	Apr. 29–May 5	1	1	
Union of South Africa:				
Cape Province	Apr. 6–12			Outbreaks.
Orange Free State	Apr. 6–12			Do.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Cairo	Jan. 29–Feb. 4	1	1	
Mexico:				
Guadalajara	May 4–10		1	
Mexico	Apr. 13–19	7		
Netherlands:				
Amsterdam	Apr. 20–26	2		
Union of South Africa:				
Cape Province	Apr. 6–12			Outbreaks.
Venezuela:				
Maracaibo	Apr. 20–May 3		6	

YELLOW FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
West Africa (French Dahomey):				
Porto Novo	May 26			Reported present.

Reports Received from December 29, 1923, to May 30, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Honkong	Nov. 18–24	1		
India				Oct. 14–Dec. 22, 1923: Cases, 14,117; deaths, 9,148.
Do				Dec. 30, 1923–Mar. 22, 1924: Cases, 17,780; deaths, 11,153
Bombay	Dec. 23–29	1	1	
Do	Feb. 3–Mar. 29	18	18	
Calcutta	Nov. 11–Dec. 29	85	69	
Do	Dec. 30–Apr. 5	490	403	
Madras	Nov. 25–Dec. 29	15	5	
Do	Dec. 30–Apr. 12	26	12	
Rangoon	Nov. 11–Dec. 29	8	5	
Do	Feb. 24–Apr. 5	13	11	
Indo-China:				
Saigon	Dec. 31–Mar. 29	4	4	Including 100 square kilometers of surrounding country.
Philippine Islands:				
City—				
Manila	Feb. 3–9	1	1	
Province—				
Cebu	Mar. 2–8	1	1	
Siam:				
Bangkok	Nov. 18–Dec. 8	4	2	
Do	Dec. 31–Mar. 29	13	8	
Turkey:				
Constantinople	Dec. 2–8		1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Azores:				
St. Michael Island	Oct. 20-Nov. 10	9	5	At localities 3 to 9 miles from port of Ponta Delgada.
Bolivia:				
La Paz	Oct. 1-31	----	3	
Do	Feb. 1-Mar. 31	----	10	
Brazil:				
Bahia	Nov. 11-Dec. 22	5	3	
Do	Dec. 30-Mar. 15	7	6	
Porto Alegre	Feb. 10-Apr. 5	3	1	
Rio de Janeiro	Jan. 20-26	1	----	
British East Africa:				
Kenya—				
Kisumu	Feb. 24-Mar. 8	1	1	
Mombasa	Oct. 14-20	1	1	Infected rats, 2. Dec. 9-15, 1923: Cases, 4; deaths, 2; removed from vessel arrived Dec. 11, 1923.
Do	Dec. 30-Jan. 5	1	1	
Nairobi	Nov. 1-21	40	----	In rural districts, several hundred.
Tanganyika	----	----	----	To Nov. 24, 1923: Cases, 39; deaths, 25.
Do	Jan. 27-Feb. 9	8	5	
Uganda	Aug. 1-Oct. 31	734	719	
Entebbe	Oct. 1-Dec. 31	251	239	
Do	Jan. 1-31	36	35	
Canary Islands:				
Las Palmas	Oct. 15-Nov. 15	14	14	
Santa Cruz de Teneriffe	Feb. 19-Apr. 8	5	----	
San Juan de la Rambla	Dec. 11	1	----	Locality 52 km. from Teneriffe.
Celebes Island	Mar. 30	----	----	Epidemic.
Macassar	Feb. 20-Mar. 8	11	7	Including Menado.
Ceylon:				
Colombo	Nov. 11-Dec. 29	31	21	Plague rodents, 24.
Do	Dec. 30-Apr. 12	95	87	Plague rodents, 44.
Chile:				
Antofagasta	Mar. 16-Apr. 12	10	1	
China:				
Antung	Mar. 31-Apr. 6	1	----	
Nanking	Dec. 16-29	----	----	Present.
Do	Dec. 30-Apr. 5	----	----	Do.
Ecuador:				
Eloy Alfaro	Mar. 16-31	1	1	
Guayaquil	Nov. 16-Dec. 31	45	13	Rats taken, 53,240; found infected, 133.
Do	Jan. 1-Apr. 30	112	35	Rats taken, 119,457; found infected, 520.
Jipijapa	Nov. 16-Dec. 15	----	----	Present.
Posorja	Apr. 1-30	6	1	
Quevedo	Jan. 1-31	3	2	
Quito	Nov. 1-30	11	1	
Santa Rosa	Feb. 16-29	----	----	Do.
Vino del Milagro	Dec. 1-15	1	----	
Egypt	----	----	----	Jan. 1-Dec. 31, 1923: Cases, 1,519; deaths, 725. Jan. 1-Mar. 27, 1924: Cases, 86; deaths, 55.
City—				
Alexandria	Year 1923	65	33	
Cairo	....do	2	2	
Port Said	....do	51	29	
Suez	....do	46	24	
Do	Jan. 2-Mar. 27	6	3	
Province—				
Assiout	Year 1923	370	211	
Beni Souef	....do	63	23	
Charkieh	Jan. 31-Mar. 27	2	2	
Dakhalieh	Year 1923	2	2	
Fayoum	....do	34	9	
Do	Feb. 18-Mar. 27	2	2	
Gharbieh	Year 1923	23	9	
Girgeh	....do	337	193	
Do	Jan. 17-Mar. 27	7	4	
Gizeh	Year 1923	3	4	
Kalioubiah	....do	76	10	
Do	Jan. 6-Mar. 27	1	----	
Kena	Year 1923	50	34	
Menoufieh	....do	290	98	
Do	Jan. 2-Mar. 27	56	34	
Minia	Year 1923	106	44	
Do	Feb. 5-Mar. 27	5	4	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece:				
Kalamata	Apr. 18–21			Several deaths.
Patras	do			Do.
Hawaii:				
Honokaa				Jan. 8–Mar. 14, 1924: Four plague-infected rodents.
Paauhau				Dec. 14, 1923: One plague rat, Feb. 14, 1924: One plague rat.
India				Oct. 14–Dec. 29, 1923: Cases, 34,542; deaths, 23,778.
Do				Dec. 30, 1923–Mar 22, 1924: Cases, 93,096; deaths, 71,174.
Bombay	Oct. 28–Dec. 22	5	5	Corrected report.
Do	Dec. 30–Apr. 5	246	194	
Calcutta	Dec. 23–29	1	1	
Do	Jan. 6–Apr. 5	8	7	
Karachi	Nov. 11–Dec. 29	42	33	
Do	Dec. 30–Apr. 17	58	44	
Madras Presidency	Nov. 4–Dec. 29	1,657	1,021	
Do	Jan. 27–Apr. 5	642	417	
Rangoon	Jan. 27–Feb. 16	20	15	
Do	Dec. 30–Apr. 5	142	132	
Indo-China:				
Saigon	Oct. 28–Dec. 8	19	6	Including 100 square kilometers of surrounding country.
Do	Jan. 27–Apr. 5	2	1	One plague rodent.
Iraq:				
Bagdad	Nov. 11–Dec. 29	8	6	
Do	Jan. 6–Apr. 5	55	29	Corrected report.
Java				Oct. 1–Dec. 31, 1923: Deaths, 2,908. Jan. 1–Feb. 29: Deaths, 1,732.
East Java—				
Djokjakarta	Oct. 1–Dec. 31		146	
Do	Jan. 1–Feb. 29		92	
Kedoe	Oct. 1–Dec. 31		1,287	
Do	Jan. 1–Feb. 29		626	
Pasoeroean	Feb. 1–29		3	
Pekalongan	Oct. 1–Dec. 31		150	
Do	Jan. 1–Feb. 29		107	
Samarang	Oct. 1–Dec. 31		430	
Do	Jan. 1–Feb. 29		183	
Soerabaya	Oct. 1–Dec. 31		9	
Do	Jan 1–Feb. 29		17	Plague rats, 5.
Soerakarta	Oct. 1–Dec. 31		886	
Do	Jan. 1–Feb. 29		704	Corrected report.
Madagascar:				
Tananarive Province	Oct. 1–Dec. 31	324	272	Bubonic, pneumonic, septicemic. July 1–Dec. 31, 1923—city and Province: Cases, 429; deaths, 367. Jan. 1–Feb. 29, 1924—city and Province: Cases, 525; deaths, 465.
Ambatondrazaka	Feb. 1–15	8		District. Type, pneumonic.
Ambositra	Feb. 1–29	8	1	Do.
Other localities	do	229	214	
Tananarive town	Oct. 1–Dec. 31	74	74	
Do	Jan. 29–Feb. 29	27	26	
Paraguay:				
Asuncion	Dec. 18	6	4	
Peru				Nov. 1–Dec. 31, 1923: Cases, 38; deaths, 24. Jan. 1–Mar. 31, 1924: Cases, 162, deaths, 49.
Locality—				
Ayabaca	Mar. 1–31	4		
Barranco	do	1		
Callao	Jan. 1–Mar, 31	7	2	
Cañete	Nov. 1–30	1	1	
Do	Feb. 1–Mar. 31	14	5	
Casma	Mar. 1–31	2	1	
Chancay	Dec. 1–31	2		
Chepen	Nov. 1–30	1		
Chiclayo	Nov. 1–Dec. 31	2	1	
Chilca	Jan. 1–31	1		
Guadalupe	Feb. 1–Mar. 31	3	1	
Huacho	do	5	3	
Huaral	do	11	4	
Huarmey	Jan. 1–Mar. 31	22	4	
Lambayeque	Mar. 1–31	2		
Lima (city)	Nov. 1–Dec. 31	22	15	
Do	Jan. 1–Mar. 31	41	21	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Locality—Continued.				
Lima (country)	Nov. 1–Dec. 31	8	7	
Do	Jan. 1–Mar. 31	11	2	
Lurin	do	2		
Mollendo	do	3	2	
Moro	Mar. 1–31	7		
Paita (city)	Jan. 1–Mar. 31	1	1	
Paita (country)	do	8	1	
Reque	do	4		
Salaverry	Mar. 1–31	1		
Sullana	Jan. 1–Mar. 31	2		
Trujillo	do	12	2	Country.
Portugal:				
Lisbon	Dec. 13–21	7		
Do	Dec 31–Jan 6		1	
Portuguese West Africa:				
Angola—				
Loanda	Oct. 1–Dec. 29	59	29	
Do	Dec. 30–Feb. 2		4	
Russia:				
Bukeeve Province				Oct. 1, 1923–Mar. 10, 1924: Cases, 339; deaths, 315; 66 plague centers; entire southeast section, cases, 473; deaths, 435.
Ural Provinces				Oct. 1, 1923–Feb. 4, 1924: Cases, 441; 4 plague centers.
Kalmuk district	Mar. 10	3		
Novy Kazanka	Mar. 1		4	At a locality on the coast; 16 cases, 8 deaths.
Siam:				
Bangkok	Nov. 4–Dec. 8	3	2	
Do	Jan. 13–Mar. 22	5	5	
Siberia:				
Transbaikalia—				
Chita	Jan. 27	2	2	Pneumonic. Occurring in workers in veterinary laboratory.
Spain:				
Malaga	Dec. 1–31	4		
Straits Settlements:				
Penang	Jan. 27–Feb. 2	1	1	
Singapore	Nov. 11–Mar. 15	4	4	
Do	Dec. 30–Apr. 5	15	12	
Syria:				
Beirut	Nov. 1–Dec. 10	3		
Do	Jan. 1–Mar. 31	3		
Turkey:				
Constantinople	Dec. 2–22	6	3	
Union of South Africa				Dec. 16, 1923–Apr. 5, 1924: Cases, 266; deaths, 159 (white, cases, 41; deaths, 20).
Cape Province				Reported Mar. 17, 1924: Cases, 11; deaths, 7.
Uitenhage district	Dec. 9–15			Plague rodent found in vicinity Haarhoff's Kraal farm.
Orange Free State				Jan. 6–Mar. 8, 1924: Cases, 132; deaths, 69.
Thaba 'Ncho				Mar. 23–29, 1924: One plague rat.
Hoopstad district	Feb. 3–9	1		
Kroonstad district	Dec. 16–27	7	3	
Do	Jan. 6–Feb. 9	43	20	
Winburg district	Feb. 3–9	1		
Wonderfontein farm	Dec. 2–8	4		Vicinity of Hoopstad. At Hoopstad, Dec. 9–15, 1923, one death of case previously reported.
Transvaal—				
Wolmaransstad district	Mar. 2–8	3	1	White, one case.
West Africa				Apr. 2, 1924: Reported present in one locality.
On vessels:				
———	Dec. 11	4	2	At Mombasa, British East Africa.
———	Jan. 24	2		At Varna, Bulgaria, from Syrian port.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	Nov. 1-30	1		
Do	Mar. 1-31	1		
Arabia:				
Aden	Dec. 16-22	1		Imported.
Do	Jan. 13-Apr. 19	8		Four imported.
Belgium:				
Brussels	Jan. 13-Mar. 29	10		
Bolivia:				
La Paz	Oct. 1-Dec. 31	45	15	
Do	Jan. 1-Mar. 31	35	19	
Brazil:				
Bahia	Jan. 6-12	2		
Pernambuco	Nov. 4-Dec. 1	15	3	
Do	Jan. 6-Feb. 23		8	
Porto Alegre	Dec. 23-29		1	
Do	Dec. 30-Apr. 12		3	
Rio de Janeiro	Nov. 18-24	3	4	
Do	Jan. 6-Apr. 12	5	2	
Sao Paulo	Sept. 3-9	1		
British East Africa:				
Tanganyika Territory	Sept. 30-Dec. 29	30	7	
Do	Jan. 6-12	2		
Uganda	Sept. 1-30	6	1	
Entebbe	Oct. 1-Dec. 31	5	1	
Zanzibar	Sept. 1-Oct. 31	116	18	Sept. 1-30, 1923: In areas 27 miles from town of Zanzibar. Oct. 1-31, 1923: In vicinity, 1 case, 1 death. In Mikotoni district, 30 cases, 14 deaths reported.
British South Africa:				
Northern Rhodesia				Dec. 4-31, 1923: Cases, 40; deaths, 5.
Do	Feb. 26-Mar. 31	2		Jan. 1-31, 1924: Cases, 50; deaths, 11; reported from Balorale, Kalabo, and Mankoya districts.
Canada:				
Alberta—				
Calgary	Jan. 27-May 10	44		
British Columbia—				
Vancouver	Dec. 22-29	10		
Do	Dec. 30-May 10	96		
Victoria	Feb. 10-Mar. 29	3		
Manitoba—				
Winnipeg	Nov. 25-Dec. 29	21		
Do	Dec. 30-May 3	81		
New Brunswick—				
Fredericton				Feb. 1-29, 1924: Cases, 8.
Gloucester County	Mar. 2-Apr. 5	4		
Madawaska County	Dec. 8-15	1		
Restigouche County	Apr. 20-26	1		Jan. 1-Mar. 31, 1924: Cases, 5.
Victoria County	Feb. 10-16	2		
Westmoreland County	Feb. 10-Apr. 26	5		
Ontario				Jan. 1-Apr. 30, 1924: Cases, 397; deaths, 31.
Amherstburg	Mar. 1-31	16	8	
Chapleau	do	13	1	
Cochrane	do	15	5	
Essex Border	do	12	6	
Fort William and Port Arthur.	Dec. 16-29	3		Occurring at Fort William.
London	Feb. 3-Apr. 5	9		
North Bay	do	1		
Perth	Mar. 1-31	14		
Toronto	Jan. 17-Mar. 31	15		
Ottawa	Feb. 17-May 10	10	1	
Windsor	Feb. 1-Mar. 15	52	11	
Quebec—				
Montreal	Nov. 30-Feb. 23	7		
Saskatchewan—				
Regina	Dec. 9-15	1		
Do	Dec. 30-Feb. 23	6	1	
Ceylon:				
Colombo	Nov. 11-17	3	1	
Do	Jan. 20-Apr. 12	6	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chile:				
Antofagasta	Jan. 6–Apr. 12	6	1	
Concepcion	Oct. 1–Dec. 31		14	
Talcahuano	Nov. 26–Dec. 2	3		Dec. 22, 1923: Five cases present.
Valparaiso	Dec. 9–15		1	
Do	Jan. 13–Mar. 15		8	
China:				
Amoy	Nov. 18–Dec. 8		11	
Do	Jan. 6–Apr. 5		14	Including Kulangsu, 14 deaths; and in hospital, Feb. 9, 1924, more than 30 cases stated to be present.
Antung	Dec. 31–Apr. 6	3	2	
Canton	Dec. 23–Feb. 23			Present.
Chungking	Nov. 4–Dec. 29			Present and endemic.
Do	Dec. 30–Apr. 5			Stated to be widespread.
Foochow	Nov. 4–Dec. 15			Present.
Do	Dec. 31–Apr. 5			Do.
Hongkong	Oct. 28–Dec. 29	769	680	
Do	Dec. 30–Mar. 22	590	601	
Manchuria—				
Dairen	Dec. 31–Jan. 20	2		
Do	Mar. 3–Apr. 20	4	1	
Harbin	Nov. 12–Dec. 22	36		
Do	Jan. 1–Mar. 17	19	5	
Nanking	Dec. 2–15			Do.
Do	Dec. 30–Apr. 19			Do.
Shanghai	Dec. 29			Prevalent.
Do	Jan. 6–Apr. 19	31	77	Cases, foreign; deaths, Chinese and foreign.
Tientsin	Mar. 23–29	2		Reported by mission and British municipality.
Chosen (Korea):				
Chemulpo	Jan. 1–31	1		
Seoul	Nov. 1–30	1		
Do	Feb. 1–Mar. 31	5		
Colombia:				
Barranquilla	Apr. 6–12		2	
Buenaventura	Nov. 18–Dec. 15	8		
Do	Apr. 3–12	3		
Costa Rica:				
Port Limon	Feb. 18–Apr. 5	2		
Czechoslovakia				Oct. 1–Dec. 31, 1923: Cases, 1; deaths, 1 occurring in Slovakia.
Dominican Republic:				
La Romana	Jan. 27–Mar. 22	14		
Ecuador:				
Esmeraldas	Nov. 16–30	4		
Guayaquil	Dec. 1–31	1		
Do	Jan. 1–Feb. 29	3		
Milagro	Apr. 1–15	1		
Quito	Nov. 1–30	167	26	
Egypt:				
Alexandria	Feb. 27–Apr. 15	4	7	
Cairo	Jan. 1–7	1	1	
Port Said	Nov. 24–Dec. 2	1		
Esthonia				Nov. 1–Dec. 31, 1923: Cases, 38. Jan. 1–Feb. 29, 1924: Cases, 14.
France:				
Cherbourg	Feb. 9–15	1		British seaman.
Gibraltar	Mar. 3–Apr. 13	2		
Great Britain:				
Liverpool	Mar. 2–8	1		In family of seaman recently returned from Oporto, Portugal.
Greece:				
Saloniki	Oct. 22–Dec. 30		11	
Do	Dec. 31–Mar. 23	23	10	
Guadeloupe (West Indies)				Jan. 2–16, 1924: Present.
Abymes	Feb. 16			Present. Vicinity of Point à Pitre.
Basse Terre	Dec. 18			Present.
Do	Jan. 12–Feb. 16			Do.
Marie Galante Island	Dec. 18			Off shore island: Present.
Do	Feb 16			Present. Estimated 60 cases.
Moule	Jan. 12–Feb. 16			Present.
Point à Pitre	Dec. 18			Present in vicinity.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Haiti:				
Cape Haitien	Feb. 3–Apr. 26	4		Mar. 9–15, 1924: Two cases in hospital.
Hinche	Feb. 10–16	1		
Port au Prince	Feb. 17–Mar. 1	2	1	Developed at Limbe, Haiti.
India				Oct. 14–Dec. 29, 1923: Cases, 9,720; deaths, 2,241.
Do				Dec. 30 1923–Mar. 22, 1924: Cases, 29,145; deaths, 5,917.
Bombay	Oct. 28–Dec. 29	55	25	
Do	Dec. 30–Apr. 5	922	459	
Calcutta	Dec. 16–29	4	4	
Do	Dec. 30–Apr. 5	18	16	
Karachi	Dec. 30–Apr. 17	129	47	
Madras	Nov. 4–Dec. 29	23	3	
Do	Dec. 30–Apr. 12	290	21	
Rangoon	Nov. 4–Dec. 29	12	4	
Do	Dec. 30–Apr. 5	53	21	
Indo-China:				
City—				
Saigon	Nov. 4–Dec. 29	133	74	Including 100 square kilometers of surrounding country.
Do	Dec. 31–Apr. 5	733	411	
Iraq:				
Bagdad	Oct. 24–Dec. 29	46	28	
Do	Dec. 30–Feb. 16	44	33	
Italy:				
Treviso	Apr. 1–15	15		Estimated.
Trieste	Feb. 17–23	4		
Turin	Feb. 18–24	1		
Jamaica				Nov. 25–Dec. 29, 1923: Cases, 115.
Do				Dec. 30, 1923–Apr. 26, 1924: Cases 418. Reported as alastrim. Delayed report for Feb. 17–23, 1924, 1 case.
Kingston	Nov. 25–Dec. 29	3		
Do	Dec. 30–Apr. 26	17		
Japan:				
Kobe	Feb. 14–Apr. 17	16	7	
Nagoya	Apr. 6–12	3	1	
Taiwan	Jan. 1–Mar. 31	8		
Tokyo	Jan. 1–Apr. 12	136		
Yokohama	Mar. 30–Apr. 6	1		
Java:				
East Java—				
Patjiram	Mar. 8			Epidemic.
Soerabaya	Oct. 23–Dec. 29	348	60	
Do	Dec. 30–Mar. 15	213	40	
West Java—				
Batavia	Oct. 27–Dec. 28	65	13	
Do	Dec. 29–Apr. 4	48	8	
Latvia				Oct. 1–Dec. 31, 1923: Cases, 6; Jan. 1–Feb. 29, 1924; Cases, 5.
Malta	Feb. 1–29	1		
Mexico:				
Guadalajara	Jan. 27–Mar. 31	5	7	
Manzanillo	Dec. 4–10	5	1	
Mazatlan	Mar. 31–Apr. 13		4	Apr. 21, 1924: Cases from 25–35. In city and vicinity. No mortality reported.
Mexico City	Nov. 25–Dec. 29	32		Including municipalities in Federal District.
Do	Dec. 30–Apr 12	140	23	Do.
Monterey				Mar. 24, 1924, 11 cases officially announced.
Salina Cruz	Jan. 1–Apr. 12	2	1	Nine cases chicken pox present.
San Luis Potosi	Mar. 16–22		1	
Tampico	Jan. 21–May 10	45	3	From Irapuato, 9; La Barra, 1.
Vera Cruz	Nov. 3–Dec. 30		4	Jan. 21–Apr. 10, 1924: Cases, 36 (12 in soldiers or soldiers' families); deaths, 5.
Do	Jan. 6–Apr. 20	2	7	
Netherlands:				
Rotterdam	Jan. 20–26	3		
Palestine:				
Jaffa	Jan. 15–28	3		
Jerusalem	Feb. 18–25	1		
Persia:				
Teheran	Sept. 24–Dec 23		4	
Do	Dec. 22–Jan. 31		2	
Poland				Sept. 23–Dec. 31, 1923: Cases, 83; deaths, 20. Jan. 1–Feb. 9, 1924: Cases, 275; deaths, 27.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon	Nov. 11-Dec. 29	19	10	Corrected report.
Do	Dec. 31-Apr. 13	98	19	
Oporto	Nov. 25-Dec. 29	39	23	
Do	Dec. 30-Apr. 26	105	57	
Portuguese East Africa:				
Lourenco Marques	Dec. 30-Jan. 5	2		
Portuguese West Africa:				
Angola—				
Loanda	Dec. 2-29		5	
Russia:				
Ukraine				Aug. 1-Sept 30, 1923: Cases, 143.
Siam:				
Bangkok	Oct. 28-Dec. 8	33	18	Nov. 25-Dec. 1, 1923; Epidemic.
Do	Dec 30-Mar. 29	10	2	
Siberia:				
Dauria Station	Oct. 21			Present. Locality on Chita Railway, Manchurian frontier.
Sierra Leone:				
Sherbro District—				
Tagbail	Nov. 1-15	3		
Spain:				
Barcelona	Nov. 15-Dec. 26		2	
Do	Jan. 3-Mar. 26		5	
Cadiz	Mar. 1-31	2		
Valencia	Nov. 25-Dec. 29	132	12	
Do	Dec. 30-May 3	428	37	
Straits Settlements:				
Penang	Mar. 16-29	2	2	
Singapore	Dec. 16-29	2	1	
Do	Dec. 30-Mar. 29	5		
Switzerland:				
Basel	Jan. 27-Feb. 9	4		Corrected.
Berne	Nov. 17-Dec. 22	15		
Do	Jan. 6-Apr. 26	38	1	
Lucerne	Nov. 1-Dec. 31	60		
Do	Jan. 1-Mar. 31	29		
Zurich	Jan. 27-Mar. 8	2		
Syria:				
Aleppo	Nov. 25-Dec. 1	1		In vicinity, at Djsr Choughour.
Beirut	Jan. 21-Feb. 20	2		
Damascus	Nov. 16-Dec. 15	7		
Do	Jan. 29-Apr. 12	38		
Tunis:				
Tunis	Oct. 27-Nov. 2	5	1	
Do	Jan. 8-Apr. 28	10	5	
Turkey				Dec. 1-31, 1923: Cases, 120; deaths, 15.
Constantinople	Nov. 11-Dec. 8	3		
Do	Jan. 6-Apr. 5	4	1	
Union of South Africa				Oct. 1-31, 1923: Colored, cases, 41; deaths, 2; white, cases, 3 Feb. 1-29, 1924: Cases, 71 (white, 6); 1 death.
Cape Province	Oct. 28-Dec. 8			Outbreaks.
Do	Jan. 20-Mar. 22			Do.
Natal	Oct. 28-Nov. 3			Do.
Do	Mar. 16-22			Do.
Orange Free State	Oct. 28-Nov. 24			Do.
Do	Jan 20-Mar. 29			Do.
Transvaal	Nov. 18-Dec. 1			Do.
Do	Mar. 11-17			Do.
Johannesburg	Nov. 25-Dec. 15	3		
Do	Feb. 3-23	2		
Uruguay:				
Montevideo	Oct. 1-31	1		
Venezuela:				
Caracas	Jan. 22			Epidemic.
Margarita Island—				
Punta Piedra	Mar. 21	60		20 miles from mainland.
On vessels:				
Steamship Coppename	Mar. 19	1		At New Orleans from Puerto Barrios, Guatemala.
U. S. Naval Hospital ship Mercy.	Apr. 1	1		At St. Thomas, Virgin Islands, from Culebra, P. I. Patient had been in Jamaica, W. I., two weeks previous. Case reported as alastrim.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels—Continued.				
S. S. Nitokris	Apr. 30	1		At Guayaquil, from Valparaiso, Chile. Under treatment at lazaretto.
S. S. Torres	Jan. 14	1		At New Orleans quarantine station from Tampico, Mexico, via ports. Case in seaman signed on at Galveston, Tex., on outward voyage.
S. S. Tupper	Jan. 20–26	1		At Gonaives, Haiti.
S. S. Vasari	Dec. 31	1		At Trinidad, West Indies, from Buenos Aires, Argentina. Vessel left Buenos Aires Dec. 15, 1923, for New York, via Santos, Rio de Janeiro, Trinidad, Barbados.
Sch. Annie M. Parker	Jan. 23	3		At sea. Vessel abandoned and crew removed to vessel bound for Rotterdam. Patients removed at Liverpool Feb. 28, bound for Newfoundland.

TYPHUS FEVER.

Algeria:				
Algiers	Nov. 1–Dec. 31	7	3	
Do	Jan. 1–Mar. 31	21	7	
Bolivia:				
La Paz	Oct. 1–Dec. 31	43	5	
Do	Jan. 1–Mar. 31	31	3	
Brazil:				
Porto Alegre	Feb. 24–Mar. 1		1	
Bulgaria:				
Sofia				Nov. 18–Dec. 15, 1923: Paratyphus fever, cases, 17. Jan. 6–Mar. 29, 1924: Paratyphus fever, cases, 9.
Canary Islands:				
Santa Cruz de Teneriffe	Jan. 14–Feb. 17		2	
Ceylon:				
Colombo	Feb. 24–Mar. 1	1	1	Case from port, 1.
Chile:				
Antofagasta	Dec. 2–8	4		
Do	Apr. 6–12	2		
Concepcion	Oct. 1–Nov. 30		4	Dec. 11–24, 1923: Deaths, 3.
Do	Jan. 8–Apr. 21	2	13	In district, at 12 localities, 92 cases.
Iquique	Jan. 20–26		1	
Talcahuano				Dec. 5, 1923: 3 cases under treatment. Jan. 12, 1924: 1 case under treatment.
Do	Jan. 31–Apr. 26	6	2	
Valparaiso	Nov. 25–Dec. 15		29	Dec. 24, 1923: In hospital, 34 cases.
Do	Dec. 30–Mar. 15		44	Reports from two districts of the Province of Valparaiso.
China:				
Antung	Nov. 12–Dec. 30	5		
Chungking	Nov. 18–24			Present.
Do	Dec. 16–29			Endemic.
Do	Dec. 30–Feb. 16			Do.
Manchuria—				
Harbin	Mar. 18–24		1	
Chosen (Korea):				
Chemulpo	Feb. 1–Mar. 31	5	3	
Seoul	do	86	7	
Czechoslovakia				Oct.–Dec., 1923: Cases, 21.
Danzig-Polish frontier:				
Mühlbanz	Mar. 6			Present: Origin stated to be focus at Mallinia.
Ecuador:				
Quito	Nov. 1–30	14	1	
Egypt:				
Alexandria	Nov. 19–Dec. 23	3		
Do	Jan. 8–Apr. 1	7		
Cairo	Sept. 10–Dec. 31	39	11	
Do	Jan. 8–28	4	2	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Esthonia				Nov. 1-30, 1923: Paratyphus fever, cases, 8. Dec. 1-31, 1923: Typhus fever, cases, 15; paratyphus fever, cases, 4. January, 1924: Paratyphus fever, cases, 6
Finland				Dec. 1-15, 1923: Paratyphus fever cases, 18. Feb. 15-Mar. 31, 1924: Paratyphus fever, cases, 12.
Germany:				
Coblenz	Jan. 27-Feb. 2	1		
Greece:				
Athens	Jan. 11-Feb. 20		7	
Saloniki	Nov. 26-Dec. 30	7	3	
Hungary				July 1-Aug. 31, 1923: Cases, 24.
Budapest	Jan. 27-Apr. 19	35	13	
Java:				
East Java—				
Soerabaya	Dec. 9-29	12		
Do	Dec. 30-Jan. 5	2		
Latvia				Oct. 1-Dec. 31, 1923: Cases, 22; paratyphus fever, 12; recurrent typhus, 3. Jan. 1-Feb. 29, 1924: Cases, 48. Paratyphus, A, 1; B, 1. Recurrent, 1 case.
Libau	Apr. 8-15	4		
Lithuania				Year, 1923: Cases, 819; deaths, 86; recurrent typhus, 13 cases. Feb. 1-29, 1924: Cases, 51; deaths, 9.
Mexico:				
Durango	Dec. 1-31		2	
Do	Jan. 1-Feb. 29		3	
Guadalajara	Jan. 27-May 3	5	8	Feb. 1-29, 1924: Cases, 2; deaths, 1.
Mexico City	Nov. 25-Dec. 29	86		Including municipalities in Federal District
Do	Dec. 30-Apr. 12	83	8	Do.
San Luis Potosi	Jan. 17-23		1	
Torreon	Feb. 1-Mar. 31		6	
Netherlands:				
Amsterdam	Mar. 2-8	2		
Norway:				
Stavanger	Dec. 25-31	1		
Palestine:				
Jaffa	Jan. 1-Apr. 15	7		
Jerusalem	Feb. 19-28	2		
Persia:				
Teheran	Sept. 24-Oct. 23		1	
Poland				Sept. 23-Dec. 31, 1923: Cases, 947; deaths, 92; recurrent typhus, cases, 67; deaths, 1. Jan. 1-Feb. 9, 1924: Cases, 1,232; deaths, 102. Recurrent cases, 63. Jan. 6-Feb. 2, 1924: Cases, 341; deaths, 26. Recurrent fever, cases, 27.
Pomerellen	Jan. 8-Mar. 25	17	4	Locality on Danzig-Polish frontier.
Portugal:				
Oporto	Jan. 27-Feb. 2	2		
Rumania:				
Kishineff District	Nov. 1-Dec. 31	15		
Russia:				
Karelian Republic	Mar. 12			Prevalent.
Novo Cherkarsk	do			Do.
Rostov-on-Don	do			Do.
Saratov	do			Do.
Ukraine				Aug. 1-Sept. 30, 1923: Cases, 768. Recurrent typhus: Aug. 1-Sept. 30, 1923: Cases, 2,307. Reported present in various sections, Mar. 12, 1924.
Siberia:				
Vladivostok	Feb. 19			Present and verging on epidemic prevalence.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to May 30, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Barcelona	Nov. 29–Dec. 12		2	
Do	Jan. 3–Apr. 2		6	
Madrid	Dec. 1–31		7	
Do	Jan. 1–31		2	
Syria:				
Damascus	Jan. 27–Feb. 2	1		
Tunis:				
Tunis	Feb. 5–11	1		
Turkey				Dec. 1–31, 1923: Cases, 41; deaths, 5.
Constantinople	Nov. 11–Dec. 29	15	1	
Do	Dec. 30–Apr. 5	11		
Union of South Africa				Oct. 1–31, 1923: Colored, 287 cases, 58 deaths; white, 2 cases; total, 289 cases, 58 deaths. Jan. 1–Feb. 29, 1924: Cases, 411; deaths, 25 (colored). Among white population, 7 cases. Total cases, 414; deaths, 75.
Cape Province				Oct. 1–31, 1923: Colored, cases, 245; deaths, 47.
Do				Jan. 1–Feb. 29, 1924: Cases, 168; deaths, 26. Feb. 24–Mar. 17, 1924: Outbreaks.
Natal				Oct. 1–31, 1923: Colored, cases, 4; deaths, 3.
Do				Jan. 1–Feb. 29, 1924: Cases, 90; deaths, 14. Feb. 24–Mar. 1, 1924: Outbreaks.
Durban	Nov. 24–Dec. 1	73		Cases occurring among nativ stevedores in the harbor area of the port and confined to one barracks.
Orange Free State				Oct. 1–31, 1923: Colored, cases, 25; deaths, 8. Feb. 24–Mar. 1, 1924: Outbreaks.
Do				Jan. 1–Feb. 29, 1924: Cases, 59; deaths, 10. Mar. 23–Apr. 5; Outbreaks.
Kroonstad District	Jan. 20–26			Outbreaks on two farms.
Transvaal				Oct. 1–31, 1923: Colored, cases, 13.
Do				Jan. 1–Feb. 29, 1924: Cases, 90; deaths, 26.
Johannesburg	Oct. 1–Dec. 31	3	4	
Do	Jan. 6–Mar. 29	8		
Potschefstrom District	Jan. 20–26			Outbreaks on seven farms.
Venezuela:				
Maracaibo	Dec. 16–22		1	
Do	Feb. 17–Mar. 1		2	
Yugoslavia:				
Croatia—				
Zagreb	Dec. 2–15	3		
Do	Feb. 17–23	1		
Serbia—				
Belgrade	Nov. 25–Dec. 1	1		
On vessel:				
S. S. Malta Maru	Mar. 17	1		At Rotterdam, Netherlands, from South America.

YELLOW FEVER.

Brazil:				
Pernambuco City	Nov. 16	3	2	